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Address

THE UNITY OF THE MEDICAL SCIENCES *

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BROOKLYN

The animal body is the most complicated and wonderful piece of machinery in the world. It is the only engine which generates its own power, disposes of its waste products and automatically renews its parts. Within the compass of the human frame is an elaborate hydraulic system having not only a double-acting force-pump and also a suction-pump for the purpose of producing a negative pressure in the veins and to assist the return circulation. The nervous system may be likened to the telephone system of a great city, for it has all the local call stations and also a central station, which we call the brain, which is so complicated that, elaborate as are the switchboards in our great exchanges, they are simplicity itself compared with the brain. The digestive system forms the furnace in which the fuel is received for the generation of power, while the skin, kidneys and lungs make up a complicated apparatus for getting rid of the waste products of combustion.

Besides this, there are numerous ductless glands which exercise a regulating function on the economy still but imperfectly understood — indeed, in some cases, not understood at all. The so-called parathyroid glands are four little insignificant bodies tucked deep into the recesses of the neck behind the thyroid itself. They are not larger than a pea, and yet when they are removed accidentally in the course of an operation for goiter the patient is afflicted with a strange disease called tetany, which is fatal if all these little bodies, usually four in number, have been sacrificed. We are entirely in the dark as to the function of these mysterious bodies. We do know that they are essential to life, minute though they are.

As the art of medicine concerns itself with the care of this complicated mass of machinery and its repair when out of order, it is not strange to find that almost every science known to man is represented somewhere in our art. If we restrict ourselves to the seven principal branches taught in the schools, namely, anatomy, physiology, materia medica, chemistry, practice of medicine, obstetrics and surgery, and speak of these subjects alone as the medical sciences, we shall but touch on the borderland of the art. Each one of these subjects is in itself a science made up of a number of different sciences.

Take anatomy, for instance. When we come to consider the bony system alone, questions of strain and material at once come up which can be solved only by sciences like those of mechanical engineering and architecture. The first boat-builder who went a step beyond the primitive dugout must surely have gained his idea of a keel and ribs from the human skeleton,, so close is the analogy between the methods of construction. There are some problems in connection with the subject of fractures which the assistance of an architect might elucidate. I was once describing to a well-known architect the curious and ingenious way in which the heart is supplied with blood, and he at once pointed out that the position of the coronary arteries just above the aortic cusps not only supplied the heart with blood through the arterial rebound, but that these vessels also prevented the "water-hammer" action of the blood on the valves themselves. The same principle is made use of in the length of pipe above the faucet of the kitchen sink.

We need the assistance of all the natural sciences to aid us in understanding the functions of the body, and it is this which brings about a unity in all the medical sciences. They are all interdependent and constantly merge into one another.

There is between sciences, however, whether physical or abstract, one common bond of union, namely, the fact that they all have for a foundation the mother of all sciences, the science of sciences, logic. Without correct methods of reasoning no science can exist. The very definition of the word "science" is "knowledge gained and verified by observation and correct reasoning." The errors of the mind may be classed under two heads, either as errors of observation or of erroneous deductions, from faulty methods of reasoning. Thus if our methods are illogical our science ceases to be such. All the errors of the past are due to one or other of these causes, and for centuries man has been blundering onward from truth to error and painfully back again to truth. Tennyson describes us well as "children crying in the night with no language but a cry." The knowledge of yesterday is the foolishness of to-day, and the wisdom of to-day will be but as folly to the future. We stumble along in our pathway toward the light, gaining a little real knowledge in each century, a little enduring truth.

There is no science which has suffered from the want of logical observation and logical thinking more than that of medicine. The fallacies of medicine would fill several volumes. Go back to the days of alchemy, the romantic mother of modern chemistry, if you would wander among the strangest mazes of human thought. Those were the days when the curious doctrine of signatories was taught and a remedy was supposed to be precious and potent in proportion to its repulsiveness. "Eye of frog and toe of newt!" Men have been brewing witches' broth for mental and bodily woes for centuries and are only just finding out what is witches'

* Address delivered before the Brooklyn Institute of Arts and Sciences.

broth and what a true elixir of life. In medicine the most common and most dangerous fallacy in which we are prone to indulge is that which mistakes a sequence for a consequence. *"Post hoc ergo propterea hoc,"* is a very ancient maxim, but it has been the corner-stone of quackery and superstition through the ages. In logic it is sometimes called the fallacy of the false cause. We assume that, because two facts are consecutive in time, they bear the relation of cause and effect one to the other. Thousands of people to-day believe that a change in the weather is caused by a change in the phases of the moon, although it has been demonstrated over and over again that the moon can have no such effect. In the same manner, in the dark and middle ages, any plague, war or other calamity which occurred during or after the appearance of a comet was ascribed to the strange and unknown visitor.

Most of the errors of medical practice, much of the voodooism and so-called science, Christian and otherwise, are based on this form of fallacy.

An amusing instance of this fallacy came under my observation the past summer. A young woman of education gave as one of the reasons why she believed in the science of the thrifty heiress of Dr. Quimby the following instance of what she believed to be its power in her own person. She had, she said, been the subject of an attack of scarlet fever, but, having received mental treatment, had been scarcely ill at all and was about in a day or two.

Nothing is better known to physicians than the occurrence of extremely mild cases of this fever in certain individuals. In some cases it is so mild and the symptoms so slight that it is almost impossible to be certain of the diagnosis. It was so in my own children, although their nurse at the same time suffered from a severe attack of the disease. This fact being admitted, it is evidently entirely erroneous reasoning to draw the conclusion that the mild case of the person in question was due to any mental treatment and not to an inherent immunity which she possessed, as do many others who have precisely similar attacks without the aid of Eddyism. These attacks are, however, quite capable of conveying the disease in a serious and fatal form to another individual less fortunate and that young woman will never know what other persons she infected when she went out, as she thought, entirely well.

The history of medicine is full of instances of vaunted remedies whose fame has rested on similar fallacious reasoning. Yet the public is prone to blame the doctors because they do not at once rush into new lines of treatment with enthusiasm before they have thoroughly verified the facts and proved the conclusions. There is nothing more dangerous and at variance with the scientific mind than hasty generalizations, based on ill digested and imperfectly observed facts. Only a few weeks ago one of New York's great journals gravely scolded the medical profession because it had called in question the power of an alleged remedy for an obscure and incurable disease of the spinal cord, to produce the results which its exploiters claimed for it, since all of us knew perfectly well that the treatment in question could not have the slightest effect on the anatomic changes in the spinal cord which are permanent and the cause of the symptoms of the disease. As the result of a possibly well meant but ill-judged journalistic puff many poor people will be woefully deceived and betrayed.

It is, therefore, necessary—nay, imperative—before coming to conclusions in such matters, to verify our facts by a long series of observations, and even then to be careful not to be too positive. There must be logic in medicine, even if there is no medicine in logic.

There is no more interesting study in medicine than the physics of the body. Physiologic chemistry is a science which is only in its infancy, but already Chittenden and many others have shown us that our methods of diet are open to much criticism. The sustenance of the human body is a problem in fuel combustion, and the elimination of ash, or, as we sometimes term it, the waste products. The body burns only a more complex and more costly fuel than that employed by the steam engine, but the basic facts of combustion remain the same in both machines. Under a steam boiler some fuels are highly wasteful, others economical. Some leave little ash, others a great deal. Some load the furnace flues with soot and the grate bars with clinkers and so stop the draught. Others burn freely. It is the problem of the mechanical engineer to furnish his boiler with the kind of fuel best suited to the work, so that the greatest amount of energy may be obtained with a maximum of economy and, what amounts to the same thing, the minimum of waste. Because men have not learned that the furnaces of their bodies require similar treatment, which involves not only a proper selection of food, but its use in exactly the proper amounts, they have fallen a prey to many diseases. The poor, alas, suffer from insufficient food of poor quality; while the rich have their own peculiar diseases, due to a plethora of foodstuffs needlessly rich in heat units. Strange to say, the diseases which result from the two conditions are not, after all, so very dissimilar.

While we are young, a large amount of reserve, both in the glandular apparatus which takes care of the waste and the assimilative apparatus which appropriates the heat units contained in the food, readily takes care of excesses in diet. Moreover, in the young the necessities of growth have to be provided for—a matter by no means to be lost sight of. As the period of growth comes to a close—in short, as we grow older—the amount of our reserve diminishes and, unless we measure our intake and make it commensurate with the work required to be done, we shall soon find that the mechanism runs with friction, because, if we take in more than we can burn up, the blood soon becomes charged with waste products which the skin, kidneys and lungs are unable to dispose of. When these waste products circulate in the blood, they act as veritable poisons and bring about changes in the whole system, but more particularly in the vascular system.

Our veins and arteries constitute an elaborate hydraulic system, subject to the same laws of hydrostatics that govern our city water-supply; if they become weakened, they may burst under normal pressure, even at their weakest point. This is usually in the brain, and then we say that the individual has an apoplexy. But the blood pressure in the arteries, through which circulates a fluid rich in waste products, is always much above the normal, rising from 135 mm. of mercury (which is about the normal pressure) to as much as 200 and over. If, then, we have the bad combination which results from a weakened vessel and too high a blood pressure, all can see the evil results which are likely to follow. In addition to this, as a result of the

constant irritation of the waste products which have failed of elimination, we get a narrowing and hardening of the arteries, so that they decrease both in caliber and elasticity. To this particular form of vascular disease we apply the term of arteriosclerosis, and this is the disease of old age; in fact, it is old age. It is sometimes said that a woman is as old as she looks, but a man is as old as he is. A more accurate phraseology, from a physician's standpoint, would be to say that an individual is as old as his arteries. I know men in my own profession of 76 years, who are really 76 years young, and not 76 years old; while I know others who have not yet reached their fiftieth birthday whose actual age is by no means measured by the number of summers and winters which have passed over their heads.

Overeating has more victims to-day than alcohol—just exactly as the victims of typhoid fever far outnumber those of either cholera or yellow fever; but alcohol, cholera and yellow fever kill quickly, and the effects of these toxemias are vivid and startling, while we overlook the results of the slower and more subtle poisons because of their very insidiousness. When we think of blood-poisoning, we think of something swift and sudden that kills with a stroke. Do not, however, forget that the slow, insidious form of blood-poisoning which perhaps takes years to do its full work, is ultimately just as fatal to the body.

A want of proper food regulation and a disproportion between the necessities of the machine and the fuel fed into the furnace always results in this slow form of poisoning and invariably brings about a dangerous rise in blood pressure and a change in the caliber and elasticity of the arteries. There is an intimate relationship here between the chemistry of digestion, of elimination, and those problems of combustion which deal with waste, sustenance and repair. Physiologic chemistry teaches us the exact number of heat units required by the organism. This is also, however, as you readily perceive, a problem in physics and adaptation as well, and the two sciences are both concerned in the solution of the problem.

Metchnikoff, the successor of the great Pasteur, in his recent work on "The Nature of Man," has pointed out the important influence which the waste products contained in the large intestine have on the production of that disease which we usually call by another term—old age. He goes so far as to say that man would be better off without the large bowel, since it is the habitat of numerous putrefactive bacteria which excrete poisons which are taken up by the circulation and aid in the slow production of arterial changes. So another science is concerned in the problem. We started with physiologic chemistry, and we end with chemistry, physics and bacteriology, all of which we must call to our aid in solving the somewhat difficult problem of what constitutes a right living.

All these matters concern the individual; but there is another of the medical sciences which concerns not only the individual, but the nation and the race—sanitation. It is the science of most recent development, and yet, if I were asked to name that branch of medicine which is to-day of the greatest influence and use to the human race, I should say the science of sanitation. It is far more important to prevent disease than to cure it after it has seized on its victim; and there are all sorts of problems involved in sanitation which demonstrate in a remarkable way the dependence of one science on another in the difficult problems which face the sanitarian. But a few years ago we did not at all appreciate the grave menace to the health of thousands of human beings of the suctorial insects. At present we are only on the brink of discovery in this great field. Entomology has taught us a great deal about the life history and habits of this widespread species of insects. It is not too much to say that millions of lives have been brought to an untimely end through this medium. Almost a quarter of a century ago Laveran, a French scientist, showed that fever and ague was due to an organism introduced into the blood by the mosquito; and subsequent observers, by close observation, found that one particular species of mosquito alone, known as the anopheles, was the culprit, and that the disease was transmitted from one individual to another by anopheles which fed on the blood of the sick and then perhaps, at their next meal, transmitted the disease to an individual previously free from it. The night air always had a bad reputation for the production of malaria, which is nothing but a form of fever and ague; but we now know that it is not the night air which is to blame—differing, as it does, not at all except in temperature from the air of a sunlit sky—but the night-flying anopheles which is responsible for the transmission of the disease after dusk. We are all familiar with the labors of the late Dr. Reed and his heroic band, who submitted their own bodies to the sting of yellow-fever mosquitoes in the effort to discover whether or not they were the transmitters of this dreadful disease of the South. We hear a good deal nowadays of the cruelties of the medical profession in the matter of animal experimentation, but I can not refrain from asking if the public should not be willing to trust to the humanity of a profession many of whose members have offered up their lives as a willing sacrifice in the cause of preventive medicine. Three of the members of the commission of five became affected with yellow fever as a result of the willing exposure of their persons in this investigation, and one of them, Dr. Lazear, after calmly permitting a mosquito in a yellow-fever ward to sting him, died a victim of the disease. As a result of the labors of this commission and the investigation of entomologists, it has been settled definitely that yellow fever can be transmitted in one way alone, and that is by the sting of a particular variety of mosquito known as the *Culex fasciata;* and the disease can be transmitted in no other way—neither by clothing, nor letters, nor yet the persons of the sick. You may sleep in the same bed with a patient with yellow fever, but, unless you are bitten by an infected mosquito, you will not contract the disease. It is impossible to overestimate the remarkable consequences to this country which these two discoveries concerning the origin of malarial fever and yellow fever will have on our destiny. The problem of the building of the Panama Canal, great and weighty as are the engineering problems involved, is, after all, a problem of sanitation. If you can not keep your workers and engineers alive on the isthmus, no amount of engineering skill will ever be competent to build that canal. In the time of the French occupation, their men died off by hundreds and thousands; and we should not to-day be prosecuting this work with success were it not for the labors of men like Laveran and Reed. They taught us that, for the prevention of epidemics of this class, a frail mosquito netting was of more value than an army

corps and any amount of shot-gun quarantine. There are other important public problems intimately connected with medical science, and which have an important bearing on the economic welfare of this land. As a profession we stand on the street corners, in the marts of trade, and in the public places, and cry aloud that typhoid fever is not a disease, but a crime, and that it is absolutely preventable. For the most part, the public will not listen to us. It goes on emptying sewage into the fairest of its streams, it pollutes its drinking-water at its source, and all along its outflow on its way to the sea, and the victims of typhoid fever, a filth disease, are carried through the streets to premature graves, as a consequence.

There is an economic side, as I have said, to this question. Let us take the expense to the state of an epidemic of typhoid fever. You know there have, in the past few years, been a number of epidemics in different cities in this state and in others. The sick in any one epidemic (not counting the dead) are numbered by hundreds. Take the Watertown epidemic of three or four years ago. They had, as I recollect it, about 1,500 cases. An individual never recovers from typhoid fever in less than four weeks, and is not available as a worker for at least four weeks more. The actual expense account in caring for an individual during an attack of this disease is about $300. This includes loss of wages, the expenses of the illness and the expenses of those who devote themselves to the sick person. An epidemic involving only 1,000 cases—if all the individuals recovered—would mean a loss of about $300,000; but this is a minimum. Half a million would be nearer the real truth. Typhoid fever costs this nation millions of dollars every year. The Panama Canal could be easily built with the waste caused by this epidemic during the years of the construction of the canal, and a large surplus would be left over for a fleet of warships to defend it. Yet we go on in the most irresponsible, childish manner, defiling our beautiful waterways and bringing grief and bereavement to unnumbered homes. In 1906 there were over 13,000 cases of typhoid fever in the United States, involving a money loss of over $4,000,000, and this goes on annually.

There is another very important economic side to this problem of sewage disposal. Why is it that the eastern states have so many abandoned farms, with ruined outbuildings and desolate and deserted farmhouses? From Maine, all through New England, you can get pages of advertisements from farm agencies, of people eager to dispose of their ancestral acres. They have the advantage of proximity to the market, but they can not compete with the west. But the problem of effective farming to-day in the east is the problem of effective fertilization of the soil. For 200 years we have taken out of the soil of this locality what we have not put back, and are suffering in consequence. Nature is a good bookkeeper and allows no forced balances, makes no dummy loans. You must put back into the soil what you took out of it; unless you do, the time will come when you are dealing with an exhausted soil and will reap but poor and insufficient profits. That is the position of the eastern farmer to-day. It costs too much to fertilize his land, and he can not, therefore, compete with the virgin soil of the west. No soil is inexhaustible. Do you suppose that the western farmer will not sooner or later be confronted with this same problem? It will take longer to exhaust the soil of the western states, but the same inexorable law will eventually require the farmer to put back what he has taken from the land if he would continue to reap the waving crops.

But how, you say, does this concern the disposal of sewage and typhoid fever? In this way: When we infect our streams with sewage and turn our harbors into gigantic cesspools, we are guilty of an enormous waste. We are throwing into the sea, from which we can not regain it, the very elements required to regenerate the land. What the soil needs is what is known as fixed nitrogen as opposed to the nitrogen which is free in the atmosphere and not available for the crops; but this is exactly what we are throwing into the sea every day. The average amount of fixed nitrogen eliminated by an adult is about 15 grams *per diem*, equivalent to half an ounce. In a community of 4,000,000, like New York, we are throwing into the sea every day (including the wastage from animals) more than 100 tons of nitrogen. Recently, as if this harbor of New York was not already a filthy cesspool, the State of New Jersey desires to add its daily contributions of twenty-one cities. And this is what every city in the United States is doing to-day—throwing away all this vast amount of nitrogen which huge communities, through the power of steam, have taken and are continually taking from the farms of the nation. And we can not get it back again. We are a reckless and improvident nation, and in our greed we are destroying this fair land. The loss of nitrogen involved in the deforestation of our mountain ranges is another source of waste, not to speak of the serious consequences which the destruction of our forests is having on our streams. He who plays must pay, and the nation, which is playing with its resources, will have a heavy debt to pay in a future not far distant. The problems of sanitation require, then, the aid of many sciences which must cooperate and act in unity if we are to stop the frightful waste both of lives and material involved in our present sins both of omission and commission.

To-day we hear a great deal about the yellow peril. A great fleet has been sent around the world as an impressive example of the sea power of this nation; and now our statesmen tell us that there is no yellow peril, but that this has been averted by skilful diplomacy and what is practically an alliance with that oriental power which lies nearest to our western shores. Nevertheless, there is a yellow peril not to be averted nor driven back by all our guns. I mean the plague. Of all forms of contagious and communicable diseases, this is the most difficult to guard against and, once landed on our shores, most difficult to eradicate. The medical science of bacteriology discovered the cause of the plague, the *Bacillus pestis*, a minute organism belonging to the bacteria. The disease is frightfully fatal; hence the importance of prevention. Here medicine called to its aid the science of entomology, not usually classed as a medical science, and by its aid showed us that this dreadful disease in the vast majority of cases was conveyed from the sick to the well by the rat flea. In every epidemic of plague it has always been noticed that the rats died by hundreds also; and investigation of their dead bodies showed the characteristic buboes or abscesses of the lymphatic glands, to which the disease owes its specific name, bubonic plague. Further investigation by the bacteriologist showed the bacilli

in the bodies of the fleas infesting the rats. As these insects leave the dead and seek out the living, and sting human beings as readily as the rats, animals which before had been considered nothing but troublesome vermin, were now seen to be the gravest menace to the public health. A few infected rats, traveling in grain cars or in ships could establish a number of different foci of the plague in this country with ease. And the prevention or eradication of bubonic plague evidently depended on the destruction of the common brown rat. Much animal experimentation was necessary before it was proved beyond a doubt that fleas from rats infected with plague were capable of conveying and did, in fact, convey the disease to the healthy. This proof was not obtained without a sacrifice of life among the laboratory workers. In fact, a number of scientific men, both in this country and in Europe, have lost their lives while working with the organism of the plague. They died martyrs of science in the cause of humanity, unnoticed by the public, unlauded by the press, and unsung. We, their comrades, cherish their memory. The plague is the real menace of Asia. This is the real yellow peril to be averted only by the science of preventive medicine and the enlightened cooperation of an intelligent government. The trinity of medical sciences — pathology, bacteriology and entomology — have pointed out to us the cause and the means of prevention.

What has been the reward of the physicians of the Public Health and Marine-Hospital Service when they have pointed out to infected communities the necessity of radical sanitary measures if they would prevent the spread of the plague, not only in the community affected, but to regions far beyond its borders? When the Marine-Hospital Service, a year or two ago, stated that there was plague in San Francisco, they were met by the fiercest denials and denunciations, both from the press and the city officials of San Francisco. Every effort was made to discredit them with the national government, and their removal was sought for with assiduity and venom. More recently similar scenes have been enacted in Oakland, a suburb of San Francisco. History is repeating itself, and local interests wish to make themselves paramount to the national welfare.

Thirty years ago there was a national board of health. Its officials declared that yellow fever existed in New Orleans. As a consequence, other ports quarantined against that city. The health officer of the State of Louisiana denied that there was yellow fever in the affected city, although people were dying of that disease every day. As a result of this conflict between the state officials and the national board of health, influences were brought to bear on Congress the following year and the appropriation was withdrawn and the board discontinued its functions, and from that time to this we have had no national board of health. There is nothing now between the plague of Asia and our own land but the officials of the Marine-Hospital Service, courageous and capable medical men, incorruptible and undismayed, either by cajolery, threats or any other attacks which may be made against them by a band of politicians which are working for their own pockets all the time instead of the national welfare. Why did the state board of health of Louisiana thirty years ago deny the existence of yellow fever? Why did San Francisco, more recently, strenuously deny the existence of the plague within her precincts? Why to-day does Oakland do the same, although rats have been found in the streets, dead of the plague, and it has been found that the infection has spread to the squirrels in the vicinity? It is because to acknowledge the existence of the plague would be bad for business—local business—the business of San Francisco, the business of Oakland. The business men of these communities are willing to endanger the lives of their fellow-citizens throughout the United States and to run the risk of the general paralysis of business entailed by a general distribution of the plague in the United States, rather than acknowledge the existence of the disease and set their own house in order and stamp out the plague before it spreads beyond their own borders. It is a strange and melancholy spectacle. The business morals of our country are sadly in need of reform in other circles than circles financial, when dollars are of more value than lives and the temporary business prosperity of a few is allowed to outweigh the welfare of the nation. We have a Department of Agriculture which looks after the plants and the lives of beasts, but up to this time the lives of plants and beasts are of more value to Congress than the lives of the citizens. Horses and cows and pigs cost money, and so their interests must be carefully conserved by a department set apart for the purpose; men and women and little children are very cheap commodities; therefore, we have neither a national board of health nor a department of health as a part of our national government.

There are other questions of public health which can never be adequately handled in any other way, in my opinion, than by a governmental Department of Health, which would be out of reach of the politicians. A new national health board would soon meet the fate of its predecessor. But a Department of Health would be above interference which could end its existence. The question of stream pollution is really an interstate problem which can not be handled by the individual states, except within their own borders. It is, to be sure, a penal offense in New York now to empty sewage into a stream of potable water without the permission of the state Board of Health; but of what avail to police one side of the stream if you do not control both sides and the source as well? Lake Champlain, for instance, is protected on the New York side and contaminated on the Vermont shore. And there are many instances of streams which are protected in New York, but contaminated in Pennsylvania. Nothing but a long and doubtful suit at law between two states, under our present system, can settle questions such as these. The Chicago Drainage Canal presents such a legal problem. The State of Illinois turned the entire sewage of the great City of Chicago into the Mississippi River, in spite of the strenuous objections of communities on the shores of that mighty stream. Questions such as these are crowding fast on our civilization and will never be adequately handled by anything short of a governmental department. The fact has become more and more evident to the thoughtful of the medical profession. Local business interests should never be allowed to imperil the welfare of the nation; and when men are so short-sighted, not to say selfish, as to be unable to see that their own local interests would suffer in any national calamity a strong central power should compel them to recognize the paramount rights of the majority.

Thus we see that every problem in medicine is complex, many sided, and that medicine is an art almost without limitation. In its broad domain, almost all

sciences are brought together to work in unison for the benefit of the individual, the nation and the race. No single medical science, by itself, is competent to solve a single problem, whether in state medicine or individual therapeutics. All the sciences embraced in our medical art (and they are many) are necessary to the solution of these problems. And unless they all work together in harmony to a common purpose little will be accomplished; and this is what I conceive is meant by the unity of the medical sciences.

234 Clinton Street.

Original Articles

THE NERVOUS DISORDERS IN WOMEN SIMULATING PELVIC DISEASE

AN ANALYSIS OF FIVE HUNDRED AND NINETY-ONE CASES*

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In presenting this paper, I have been prompted by a desire to give the result of several years' experience obtained in the treatment of gynecologic patients in the clinic of the Woman's Hospital of Philadelphia. The symptoms of the two great neuroses, neurasthenia and hysteria, are constantly being misunderstood in their relation to pelvic disease. The nervous phenomena of these affections present only confusion to the minds of many of us, nor is this strange when nervous specialists are still contending among themselves as to their symptomatology. Morton Prince, of Boston, maintains that the whole symptom-complex of neurasthenia is but one of the manifestations of hysteria, while Babinski goes so far as to maintain that hysteria itself is but a disease of suggestion brought on by the examinations made by the physicians. We may, therefore, pardon the great body of the medical profession if under such trying circumstances the symptoms of these neuroses are misinterpreted. In order that the vagueness in regard to these affections may be eliminated from the mind and replaced by clear ideas concerning these diseases, it is necessary to reason from certain basic principles formulated by the majority of our eminent neurologists.

NATURE OF NEURASTHENIA AND HYSTERIA.

Hysteria and neurasthenia occur in those persons of a normal as well as in those of a neurotic inheritance, and men and women both are subject to these affections, though the largest number of cases occur among women. A close study of these nervous disorders proves that true organic pelvic disease plays but an insignificant part in their development, and that their real origin must be sought elsewhere. The exciting factors are to be found in the environment plus heredity. When neurasthenia occurs in those in whom hysteria is latent, it acts as any other cause in the development of the latter. Hitherto the symptoms of both affections manifested in one individual have commonly created confusion as to their true import. In the adolescent and adult state, all humanity is subject to great strains. The most prominent among these are, first of all, the results of a defective education in which self-control and restraint are not inculcated early in life, and a too close application either to pleasure or to study; later the bearing and rearing of children, household cares and worries, nursing of members of the family—a strain not only physical but also mental—financial stress, grief and shock occasioned by death, by accidents, by troubles, by frictions of all kinds, great and small. Anxieties and cares, no matter how trivial in character, must be viewed from the standpoint of the patient. The strains mentioned are far more potent as causes of the neuroses than organic pelvic disease. The nervous symptoms connected with organic pelvic disease are, indeed, very limited. While it is not to be denied that there are present local pain, pain referred to the back, to the hips and thighs, together with general indications of ill health, these symptoms do not of themselves constitute true functional neuroses, such as neurasthenia or hysteria. They are but symptomatic of the pelvic disorder, just as they may manifest themselves in connection with any other visceral disease. The distinctive term "neurasthenia symptomatica" or "spurious neurasthenia" has been applied to nervous symptoms present under such conditions. The hold of the doctrine of "reflex nervous disorders" on the profession for so many years is little short of marvelous, but its fallacy has been demonstrated beyond dispute by our increasing knowledge of nervous diseases.

On account of limitations of space, it will be necessary to present in a brief and concise form only the most prominent symptoms of neurasthenia and hysteria. True neurasthenia or "neurasthenia simplex" is essentially a "fatigue neurosis" (F. X. Dercum). The cardinal symptoms are a ready exhaustion of the nervous system with diminished elimination of nervous energy, increased irritability, and as a result decreased resistance to impressions from without. In this affection the wear and tear of the nerve cell is greater than its recuperative power and the physiologic equilibrium is impaired. The symptoms of this great "fatigue neurosis" are divided into motor, sensory, psychic and somatic phenomena. Those of the motor system consist of ready muscular fatigue made manifest on exertion due to loss of strength in the muscles of the back, legs and arms. Actual paralysis, however, is never present in neurasthenia.

The backache is usually referred to the lumbar and sacral regions; it often extends upward over the dorsal area and downward over the gluteal muscles. Aching of the limbs, when present, is referred to the thighs, legs, arms and shoulders. The special senses also present the symptoms of fatigue. On reading, the letters may become blurred, and, if it is persisted in, headaches, both limited and diffuse, supervene. The hearing may become dull, as may the other special senses. The psychic condition manifests itself by a lessened capacity for sustained mental action. Persistence of mental effort brings on the symptoms of exhaustion with its fatigue sensations. Thoughts do not flow readily, the will power lessens, indecision arises and increased mental and emotional irritability manifest themselves. Sleep becomes broken and disturbed, bad dreams ensue and in severe cases obstinate insomnia may result.

The somatic phenomena are commonly gastrointestinal atony, with its diminished secretions, flatus and constipation. The circulatory disturbance is usually shown by more or less enfeeblement of the heart's action with cold hands and feet. This condition is often accompanied by accidental heart murmurs.

* Read before the Alumnæ Association of the Woman's Medical College of Pennsylvania, May 21-22, 1908.

In addition to these symptoms, others may make their appearance, called the secondary or adventitious symptoms of neurasthenia. They are but the outgrowths of the essential fatigue symptoms and also present motor, sensory and psychic phenomena. The motor symptoms are tremor and spasmodic fascicular jerkings due to the primary muscle fatigue.

The sensory symptoms are those sometimes associated with a neurasthenic headache, such as sensations of constriction, of pressure, of throbbing, of dizziness and of fulness. The not infrequent phenomena of ringing, roaring and buzzing in the ears are also secondary phenomena. These sensory outgrowths are due to lowered vasomotor tone so that the slightest exertion may at times affect the intracranial circulation.

The secondary adventitious psychic symptoms are manifestations of loss of will power, as shown by indecision and uncertainty. Sometimes special forms of fear, the various phobias, are added to these psychic phenomena and are also outgrowths of chronic fatigue.

Symptomatic or "spurious neurasthenia," as before stated, is the result of visceral or somatic disease and very imperfectly simulates nervous exhaustion. Hysteria, the great "psychoneurosis," a functional disease of the cerebral cortex, is a common disease of daily life and is constantly unrecognized by physicians. Erroneous diagnoses of visceral and grave organic disease are frequently made because physicians are unfamiliar with its syndrome, especially unfamiliar with its sensory stigmata; that is, its areas of painful hyperesthesia. The attendant suffering is often far in excess of that from organic lesions. The painful areas are most frequently found in most unexpected places on the skin and mucous surfaces and are commonly misunderstood as indicating visceral disease. On examination, especially pelvic, every anomaly discovered must not be considered as explaining the symptoms. Usually the findings are nothing more than individual peculiarities and do not of themselves indicate medical or surgical interference. Under normal conditions the uterus now and then deviates laterally, is often more or less anteflexed, is sometimes in the vertical position and again inclines backward to a varying degree until there is present a retroversion. There is some justification in regarding the latter when existing uncomplicated as a reversion of type or morphologic arrest and not an abnormality. It is well known that in intrauterine life the uterus still maintains the vertical position in the eighth month and that in apes retroversion is a normal condition.

The syndrome of hysteria is fixed and definite and includes motor, sensory, psychic and somatic phenomena. The motor symptoms of hysteria, the palsies, contractures, tremors and incoordination, are not misleading and are naturally referred to their nervous origin. Some of the sensory phenomena also, such as the anesthesia, hypesthesias and alterations of temperature sense, need not be considered here. It is especially important, however, to consider in detail the various cutaneous painful areas met in hysteria, as these are of extreme interest because of their simulation of pelvic disease. Not infrequently the areas of hysterical hyperesthesia become areas of hyperalgesia and then are not only tender to touch, but spontaneously painful. They bear no relation whatever to sensory nerve distribution or segmental representation in the cord, which fact at once stamps them as cortical or psychic in origin. These areas of hyperesthesia are sometimes found on both sides of the body, though they are most frequently found on one side only, usually the left. These painful areas are most varied in extent and distribution, but as a matter of clinical observation they seek by preference certain localities, especially the inguinal region. On account of the anatomic relation which the ovary bears to the inguinal region, the true significance of these painful areas has been greatly misunderstood, and as a result these areas have been misnamed areas of "ovarian tenderness." As to the incorrectness of this term there can be no doubt, as these areas are often observed in men as well as in women in whom the ovaries have been removed. These areas are usually superficial, but occasionally there are cases in which the pain is deep seated, just as in some cases of spinal tenderness or of clavus hystericus of the head; but even in these the pain can be demonstrated to exist in the abdominal wall. The method adopted to demonstrate these areas is as follows: After the painful area has been carefully located on the abdominal wall, the tip of the forefinger of the right hand is allowed to rest lightly on it; the forefinger of the left hand is then introduced into the vagina and directed upward, to one side or the other, until its tip is immediately below its fellow of the right hand which is on the abdominal wall. Just as soon as pressure is made between the two fingers, the patient flinches, which does not occur when pressure is made in other directions, or when other portions of the abdominal walls are included. This hysterical inguinal pain has been compared to the boring and penetrating pain of clavus hystericus, the name used when the area is located in the tissues of the scalp. The so-called "inframammary" tenderness is a painful area usually located under the left breast; it is sometimes found, however, in the same situation on the right side, either alone or in conjunction with the area upon the left side. This pain is often very intense in character; occasionally it centers in the nipple and then gives rise to so-called mastodynia. Other painful areas are occasionally found above the spines of the scapulæ, to the sides of the cervical, dorsal and lumbar spines, over the sacrum and at the tip of the coccyx, giving rise to so-called coccygodynia. The hyperalgesic areas may be found on the mucous surfaces of the vulva, vagina, rectum, bladder, nose and tongue. They are usually most distressing in character and give rise to intense suffering, especially when located in the vagina and rectum. Under such conditions sexual intercourse becomes impossible and bowel movements become agonizing.

The concomitant existence of somatic symptoms of hysteria, such as globus hystericus, hysterical vomiting and anorexia, amblyopia, contracture of the visual fields and like phenomena are, of course, strong corroborative evidence. Among other somatic disturbances of hysteria we find fever, cough, disturbances of the heart's action, of the general circulation, of digestion, of loss of voice, phantom tumors and like obscure phenomena.

The psychic phenomena of hysteria are of great interest and are not difficult of recognition when we bear in mind that the evidence of disturbed mental balance is always present. Emotional inhibition is defective and phases of exaltation and depression are present without adequate cause. The hysterical subject reacts inordinately to suggestion. In health organic and visceral sensations do not enter into the makeup of consciousness. In hysteria, however, these sensations pre-

sent themselves in an illusional form and are wrongly interpreted. The pain in the groins suggests to the patient grave pelvic disease or appendicitis; the "inframammary tenderness" suggests serious disease of the breast. The abnormal reactions of the patient to the suggestions furnished by her own body are but exceeded by the reactions which ensue upon suggestions from without, that is, suggestions furnished inadvertently by physicians, nurses and relatives. Hysterical stigmata, when in abeyance, are often developed by incautious statements. Therefore, under such circumstances, a pelvic examination should never be made without unmistakable indications. For, even independent of the moral shock, a fixed belief is engendered in the patient that she is the victim of some grave and mysterious disease to which she attributes all her symptoms. In hysteria the basic condition consists in a degree of suggestibility that is pathologic, and it can be readily understood that in such a soil almost any nosophobic ideas can be developed.

ANALYSIS OF CASES

In keeping with the above considerations, an analysis of 591 cases presenting themselves in both clinical and private practice will prove interesting and instructive. Of this number 179 cases were excluded because they bore no direct relation to the matter in hand. They consisted of pregnancies, miscarriages, venereal diseases and unimportant affections. In the normal pelvic conditions all non-inflammatory affections were excluded, such as lacerations, anteflexions, retropositions embracing the retroversions, retroflexions and anteflexions retroposed.

STATISTICS

TABLE 1.—Hysterical or neurasthenic phenomena or both were found in cases presenting the following conditions:

	No. Cases.
Pelvic organs entirely normal	181
Tubo-ovarian inflammations and exudates	34
Fibroid growths	4
Cervical and perineal lacerations	21
Dysmenorrhea	23
Anteflexions	28
Retropositions	36
Splanchnoptosis (relaxation of uterine supports)	3
Lacerations that were repaired	2
Where both ovaries had been removed	9
Where one ovary had been removed	2
Where the appendix had been removed	4

TABLE 2.—Hysterical or neurasthenic phenomena were absent in cases presenting the following conditions:

	No. Cases.
Cystic degeneration of the cervix	3
Tubo-ovarian inflammations and exudates	53
Fibroid growths, including one weighing 17 pounds	11
Cervical and perineal lacerations	39
Dysmenorrhea	7
Anteflexions	24
Retropositions	44
Splanchnoptosis (relaxation of uterine supports)	19
Carcinoma (no nervous symptoms found in any case of carcinoma)	9

TABLE 3.—The painful cutaneous areas of hysteria present in absolutely normal pelvic conditions were as follows:

	No. Cases.
Both groins (so-called ovarian tenderness)	70
Left groin (so-called ovarian tenderness)	40
Right groin (so-called ovarian tenderness)	20
Under both breasts (inframammary tenderness)	2
Under left breast (inframammary tenderness)	26
Under right breast (inframammary tenderness)	1
On either side of the spine in the cervical region	3
On either side of the spine in the dorsal region	14
On either side of the spine in the lumbar region	9
Over the sacrum	14
At the end of the coccyx	10
Above the spines of the scapulæ	4
Clavus hysterious	5
Deep intrapelvic pain (hysterical)	10
Painful areas on mucous surfaces, vagina, vulva, rectum and tongue	4
Hysterical vomiting	3
Hysterical pain in one eye during menstruation	1
Hysterical globus	9

The other nervous phenomena present in absolutely normal pelvic conditions were as follows:

	No. Cases.
Limbache (legs, thighs, arms and shoulders)	40
Sacral backache	60
Dorsal backache	2
Headaches, vertical	3
Headaches, diffuse	6
Headaches, frontal and occipital	35
Headaches, occipital	26
Headaches, frontal	16
Disturbed sleep	18
Insomnia	3
Gastrointestinal disturbances of nervous origin, such as constipation, flatus, gastric distress, diminished secretions and anorexia	96

TABLE 4.—Painful areas found in pelvic diseases were as follows:

	No. Cases.
Both groins (so-called ovarian tenderness)	14
Right groin (so-called ovarian tenderness)	3
Left groin (so-called ovarian tenderness)	14
Under left breast (inframammary tenderness)	2
On either side of the spine in the cervical region	1
On either side of the spine in the dorsal region	2
On either side of the spine in the lumbar region	4
Clavus hysterius	3
Over the sacrum	3
At the end of the coccyx	2

The other nervous phenomena present in pelvic disease were as follows:

	No. Cases.
Limbache (legs, arms, thighs and shoulders)	3
Sacral backache	10
Lumbar backache	7
Headaches (frontal and occipital)	3
Headaches (frontal)	3
Headaches (occipital)	5
Headaches (diffuse)	2
Gastrointestinal disturbances of nervous origin such as constipation, flatus, gastric distress, diminished secretions and anorexia	12
Disturbed sleep	5

The above tables speak for themselves; there is obviously no relation between hysterical stigmata and pelvic disease; this is likewise true of the symptoms of neurasthenia. That hysteria and neurasthenia can coexist with pelvic disease goes without saying, just as they may coexist with a brain tumor or a broken leg. The above statistics do not even show that neurasthenia or hysteria exist as frequently in pelvic diseases as in other visceral affections. Certainly the above facts prove that operations on the pelvic and other viscera for the relief of nervous symptoms have no justification. It is perfectly clear that no operation should be performed which has no positive surgical indications. When this subject is fully understood the fastening up of so-called loose kidneys, the removal of normal ovaries and tubes, of normal uteri, of normal appendices, of pieces of normal coccygeal bone, will cease, as will also repair of trivial cervical lacerations. A careful examination of the records from hospital laboratories will abundantly testify to this assertion of the removal of normal organs.

NECESSITY FOR CAUTION WITH REGARD TO SURGICAL TREATMENT

In looking over the above tables it will be seen that there are more retropositions of the uterus without nervous symptoms than retropositions existing with them. It is the same when we compare the anteflexions, the lacerations, the splanchnoptoses and malignant disease. Dysmenorrhea is most striking in that the tables show in almost every case symptoms of functional nervous disorders associated with it, suggesting that dysmenorrhea in many instances is but one of the many phenomena of these nervous affections. This view would greatly reduce the number of dilatations which are regarded by some as useless, senseless and cruel except for diagnostic purposes. Uncomplicated retroversion requires no surgical or medical interference and presents practically no symptoms. Lucy Waite and Byron Robinson of Chicago experimented on the cadaver by injecting air into the bladder and rectum, and they dem-

onstrated an extensive deviation on variation of position regarding the uterus. Anatomically and physiologically the uterus is a mobile pelvic organ and not an abdominal one, and to force it upward and forward, to stitch it to the abdominal wall, compromises it in its function, circulation and nerve supply, substituting one pathologic state for another.

A word as to Alexander's operation. Byron Robinson and others maintain that it is an unnecessary, harmful and unnatural operation and should become obsolete. The round ligaments do not support the uterus and can be but forced substitutes, that is, pathologic. They are found relaxed when the abdomen is opened. If they are forced into assuming the function of supports of the uterus they will elongate and a patient will require an Alexander operation "about as frequently as a man will need his hair clipped." He claims that it is a cosmetic operation at high risk and cost to the patient. Frank H. Hancock[1] finds that 26 per cent. of gynecologic patients have retroversions and proposes that they be all corrected by hysteropexy. Byron Robinson[2] of Chicago asserts, in answer to Dr. Hancock's article, that such bids for surgery tend to "scalpel storms." He further says that "surgeons have gone mad, diagnosis and medical treatment are becoming buried, obscured in surgical technic. The postmortem is useless, forsooth, because diagnosis must be made in the living by abdominal incision and direct vision. The mechanical surgeon has arrived with his commercial tool-chest, the cutter with his 'scalpel storms' is multiplying rapidly, surgery is becoming a by-word, the 'pexyite' is abroad in the land, the suspicion of the people is beginning to arise from the slaughter of the mechanical surgeon. Irrational surgery is debased surgery, a misapplication of the art. Unnecessary surgery is criminal, harmful surgery; it injures both patient and physician and creates misery. Because a woman becomes well subsequent to a gynecologic operation without positive surgical indications affords no proof whatever that she required it."

No one will deny, however, that when the uterus is dislocated, that is, fixed by adhesions, surgical means should be employed to loosen it after medical measures have failed, but it should not be subjected to a new dislocation by fastening it to the abdominal wall. The pelvic floor should always be repaired when lacerated, as it is so intimately connected with the support of the uterus. In all inflammatory conditions of the pelvic organs, such as exudates, endocervicitis, endometritis, metritis and prolapsed tubes and ovaries, induction of hyperemia, that is, a fresh supply of blood to the parts, presents the only means of cure. This hyperemia can be induced in no better way than by means of the hot douche frequently repeated, glycerin tampons, hygroscopy, electricity, menstruation and gestation.

It has been frequently stated as a truism that a gynecologist should be first of all a wise physician. From a close observation and study of these tables "gynecologist" should be further interpreted as "one skilled in functional nervous disorders," for the gynecologic clinic of to-day is largely neurologic. How imperfectly the neuroses are understood is best illustrated by a casual remark made by one of our foremost gynecologic teachers that a wandering pain was a hysterical pain, and a fixed pain was one indicative of organic disease. How far he was from a realization of the truth may be conceived from the fact that hysterical pain is often so fixed in character that even the psychic impress made on the cerebral cortex by the removal of pelvic organs, normal or diseased, does not alter it in the slightest degree, but often makes it more fixed than ever. A prediction from a study of these cases would not be out of order in reference to the gynecologist of the future when he has grasped the neurologic simulation of pelvic disease. His greatest endeavor will be to have the fewest operations to his credit instead of the greatest number. The conservation of normal pelvic organs and the restoration to health of diseased ones by medical means whenever possible will be his highest aim.

810 North Broad Street.

1. A Plea for the Correction of Uterine Displacements. Med. Rec., New York, March 7, 1908.
2. Uterine Displacements. Med. Rec., New York, April 11, 1908.

CANCER OF THE UTERUS

OUR PRESENT MEANS OF LESSENING ITS MORTALITY *

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The question of lessening the mortality in cancer of the uterus is a subject which ought to be of interest to every member of the profession, since, as has been shown by the painstaking statistics of Welch, cancer of the uterus ranks first in incidence when primary carcinoma is considered, forming practically one-third of all the primary cases. The frequency of its occurrence can well be shown by a concrete example. According to Kelly, of the first 11,382 patients admitted to the gynecologic service of the Johns Hopkins Hospital in fifteen years for all gynecologic affections, 412, or 3.06 per cent., were cases of cancer of the cervix. Crile, in his oration before the American Medical Association at Chicago in 1908, states that statistics show that one woman in every eight who reaches her thirty-fifth year dies of cancer, and that, taking the prevalence estimate of the British Isles and applying it to the United States, there must be at this present moment approximately 80,000 cases of cancer in this country alone. These figures, of course, include cancer of all organs, but, as I have said before, uterine cancer easily heads the list in frequency. This is the condition which is confronting the race, and the question arises what we have done and what we can do to prevent its mortality, which in untreated patients is 100 per cent. Of course, we ultimately hope to find the cause of the disease and so attack it at its source, and to this end thousands of dollars are being expended in careful and painstaking investigation, and through munificent benefactions the services of some of the keenest minds in medicine are engaged in research along this line. But so far we may say, in all candor, that the results have been from a practical standpoint universally disappointing. For the present the cause of cancer is as far from a solution as it was years ago, but we must be optimistic and trust to the future for its solution, since many as seemingly impossible problems have been conquered in the past.

At the present time, then, we are concerned with the enormous prevalence of the disease, while we are still in the dark as to its cause. Such being the case, there

* Read before the Maine Medical Association, at its fifty-sixth annual meeting, Bangor, June 10-15, 1908.

can be no real prophylaxis. As we can not prevent its incidence, let us turn to methods of combating its ravages—to its cure. I think I am justified in saying that no well-balanced, open mind doubts that the only cure of cancer of the uterus in our hands to-day lies in its complete extirpation by surgical means. It seems to be the judgment of the majority that all other lines of treatment, whether by serums, trypsin, or escharotic pastes, etc., are merely palliative. Turning, then, to the surgical methods of cure, we again find opinion focusing on a single method. In the early days amputation of the cervix was advised and practiced; later vaginal hysterectomy had its day. Following this came pan-hysterectomy by the abdominal route in order to remove the parametrium more completely; and then came the methods of Clarke, of Philadelphia, and Sampson, of Baltimore, in this country, and Wertheim in Germany, who were all working along the same lines, these lines being the application to cancer of the uterus of the surgical principles developed by Halsted in the cure of cancer of the breast, namely, the excision of the growth *en masse* together with those lymphatic nodes that anatomically drain the area affected, and the excision of these nodes, whether they were macroscopically involved or not.

I will not enter here into a discussion of the merits or of the necessity of these latter more radical procedures, as their details are of purely surgical interest and as such must be decided on by specialists in that line. One thing, however, is certain, that nothing more radical than the procedures of Clarke, Sampson and Wertheim can be conceived of. Modern surgery has done its best, and our only present hope of cure has reached its limit. If better results are to be obtained, surgery must rely on some outside ally. What, then, are the results of these surgical procedures?

In this country various operators report cures, over the three-year period, of from 5 to 8 per cent. or less. Contrast this with the statistics of Wertheim,[1] who there reports a percentage of cure of 22.5 per cent. of all patients seen. Surely the surgical ability of Wertheim is not sufficient to explain this discrepancy of results. The explanation lies in the fact that he sees his cases in an earlier stage than do the operators in this country, and herein lies the secret of his success. If 22.5 per cent. of all patients seen were cured after three years, cancer of the uterus would be practically only as fatal as pneumonia—a surely remarkable result.

We cure cancer of the lip in practically 90 per cent. of the cases. Why? Simply because we see it in its incipiency—in many cases, in fact, in the so-called precancerous stage. Under these conditions the surgeon is triumphant in practically every case. As Crile says, "Halsted quotes the elder Gross—and Gross was the first surgeon of his day—as stating that he had never cured a case of cancer of the breast. Halsted, however, developed this field by applying a perfected technic to a correct pathologist's conception, and his work serves as a general model for cancer operations.

"In the Johns Hopkins clinic 47 per cent of all patients with breast cancer operated on have remained well for three years or more. Considering only the cases that seemed at the time of operation to be clinically favorable, seventy-five out of every hundred were cured. A group of cases still more impressive is that consisting of those in which a clinical diagnosis of cancer could not be made prior to operation. Of these, 96 per cent. remained well for three years or more." I will not multiply instances, but these figures will illustrate my proposition that surgery plus, and always plus, an early diagnosis will give a high percentage of cures in malignant disease.

Coming back, now, to cancer of the cervix, we are met by an entirely different array of figures. Taking again the statistics of the Johns Hopkins Hospital as a concrete example, we find that of the cases which present themselves to this hospital over 70 per cent. have reached such a stage of development that no operation, save possibly a palliative curettage, can be considered; yet in over 60 per cent. (more than half) of these patients a history can be elicited that should have sent the woman to her family physician for advice, and this history has extended throughout a period of six months or more. Here lies at the present time our main point of attack. An effort must be made to bring these patients to the surgeon before the disease has reached an inoperable stage. The difficulty lies in the fact that in the majority of cases of cancer of the cervix the earliest symptoms begin to be manifest about the time of the menopause, and the earliest symptoms of cancer of the cervix are not pain or profuse hemorrhage, many text-books to the contrary notwithstanding. The earliest symptoms are most insidious, a thin watery discharge, a slight change in the character of the leucorrhea, with perhaps now and then a mere "show" of blood. The danger lies in the fact that these symptoms occur about the time of the menopause, and that most women, and not a few practitioners, have had inculcated into their minds the belief that at this time all sorts of irregularities in the vaginal discharge occur and are of no significance. The woman consults her elder neighbor and is reassured; she in many cases consults her family doctor and is again reassured that such changes mean nothing and that in the course of a few months all will be well. In many cases this will be so, but in the meantime those cases in which the changes are due to incipient malignant disease will have passed into the inoperable stage and the only hope of salvation will have been lost.

Our present hope lies entirely in the hands of the general practitioner. He must start a campaign of education among the women of his clientele. All women approaching the cancer age have, as a rule, some physician to whom they look for advice and who occupies to them the position of "father confessor" in all medical affairs. If the family doctor will impress on these women the necessity, as they approach the menopause, of reporting to him any changes in the character of their vaginal discharge; if he will then go to the point of impressing on his patients the value of a routine vaginal examination at least once in every six months in women between the age of 35 and 55, whether they have any symptoms or not, the statistics of operable cancer of the cervix will take their place along with those of cancer of the breast. Cancer of the cervix does not differ in its biology from cancer on the visible surfaces of the body, and could it be seen in the same stage of its development it would be just as amenable to surgical cure.

Another point which I wish to make is the necessity of the doctor considering as serious all disturbances of menstruation occurring in the cancer age. The woman is doubtless, through ignorance or misinformation,

1. Wien. klin. Wchnschr., 1904, xvii, 783.

often at fault in neglecting early signs, but too often, I fear, the doctor himself is negligent. The physician should make it an iron-clad rule to insist, and insist absolutely, on not only a thorough vaginal examination, but on a visual inspection of the uterine cervix in all such cases on the occasion of the first consultation. If the inspection of the cervix shows the least suspicious sign, a piece of tissue should be removed for microscopic examination, and this may, and in most cases should, be performed without allowing the woman to know what has been done. If the woman is informed that the doctor desires to remove a portion of the uterus for pathologic examination, the offer will be almost invariably declined. The cervix is practically devoid of sensation. At the first examination, under the guise of an ordinary treatment, the cervix may be grasped lightly with a volsellum and a wedge-shaped piece of the suspected area removed with a couple of snips of the scissors without giving any more pain or discomfort than the ordinary cervical application would incur.

The aid of the microscope can then be invoked and the patient treated as the results of this examination dictate. The hemorrhage following this procedure is always slight, can usually be left to the control of a vaginal pack, and at most will require one suture for its control. This is the only salvation for these sufferers—to obtain a microscopic diagnosis in the very early stages and in what might be called the precancerous stage.

In general terms it may be stated that a cancer of the cervix that can be diagnosed unhesitatingly as such by the touch, the eye or history, has progressed to the border-line between possibility and impossibility of cure. It is only by the use of the microscope in the very early stages that we can hope to enlarge our percentage of favorable cases materially. I have dwelt especially on cancer of the uterine cervix because of its much greater frequency, but all of these remarks have equal application to cancer of the uterine body. Here, even more, if possible, than in cancer of the cervix, must we rely on the obtaining of uterine curettings for an absolute diagnosis, a procedure which requires only a light primary ether, gas or ethyl chlorid anesthesia for its successful performance.

That a campaign of education can be made to produce results is proved by the experience of Winter, of Königsburg, whose results are not as well known as their importance deserves. In 1902 he undertook to improve his results in cancer of the uterus by publishing a series of pamphlets on the early signs and symptoms of uterine cancer, distributing these not only to the physicians of East Prussia, but also in popular style to the laity at large. As a result, in one year his cases suitable for operation increased from 62 to 74 per cent.; after the instructions were issued, 90 per cent. of the patients applied for treatment within two weeks after first seeing their family physician. The number of cases seen within six months was reduced from 12 to 5 per cent.; cases seen within nine months, from 18 to 5 per cent., and in those cases in which symptoms had lasted a year the decrease was from 12 per cent. to none at all! With these statistics as a proof of what can be accomplished by one man in a year's time, certainly we should be optimistic as to the result of a general campaign of the profession along these lines.

RECAPITULATION

1. Complete surgical extirpation is at the present time our only method for the cure of cancer of the uterus, but the percentage of cures is much below what it might be made.

2. Our present means for lessening the mortality lie in a campaign of education, directed, first, to the general public by the family physician, so that the patient will not neglect to consult him on the occurrence of unusual symptoms, and, second, to the family physician himself, to the end that he may realize that every case of disturbance of the vaginal discharge at or about the time of the menopause is most significant and suspicious. We should emphasize also not only the necessity, but the ease of obtaining sufficient tissue for a microscopic diagnosis in every remotely suspicious case at the time of the first consultation and without the employment of any anesthetic. This idea has been so well epitomized by Kelly that I will close in his words:

> There can be no doubt that the most important agent in the instruction of the public is the general practitioner. Almost all women, and married women especially, have a more or less intimate acquaintance with some physician with whom they converse at one time or another on the subject of their own health or that of their relatives, and in whose opinion they place great confidence. If every family physician would make it a point to take advantage of the opportunities afforded him by such relations to point out the significance of hemorrhage, vaginal discharge and pelvic pain occurring about the time of the menopause, he would accomplish more toward diminishing the death rate of cancer than can be done by any means we can command at present. Every woman who has borne children should be examined by a competent physician at least once every year until she is fifty-five years old. The effect of an adoption of these rules would be prompt discovery of an enormous number of cancer cases in their very incipiency. That such a course would be distasteful to women at large, I do not doubt, but drastic measures are often necessary to purge ill humors, and who would measure such a trifling sacrifice against the great gain of even a small increase in the percentage of operability of this distressing and to-day largely hopeless class of cases?

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THE ROENTGEN RAYS AS AN AID IN THE DIAGNOSIS OF CARCINOMA OF THE STOMACH

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Since "35 per cent. of all visceral carcinomata are found in the stomach,"[1] and since surgeons believe that if this disease is recognized early many lives can be saved or prolonged, it behooves us to bring to our aid every means that will assist in making the diagnosis.

From time to time new methods have been added, each claiming superiority over the others and giving us a sense of exactness and certainty. As time passes, the results of each new method are found to have so many exceptions or possible errors that we are likely to go to the other extreme and cast each aside as useless, to grasp at something new. This may also be the fate of this latest and, apparently, most valuable and exact means at our command. I can already see many possible errors, and, unless the work is done thoroughly and most carefully and performed by an expert, or at least

1. Virchow, quoted by Redman; Surgery, Gynecology and Obstetrics, June, 1908.

by one who is cautious and not too ready to jump at conclusions, it, too, is bound to fall into discredit.

We shall be on safe ground if we look on this method as an aid only, and combine with the results from its use all the information that may be obtained by other methods of investigation.

True, the exploratory operation is probably the final means of exact diagnosis, but who is willing to submit to this method of investigation until all others have been exhausted?

Holzknecht and Jonas[2] have been the most faithful and thorough investigators that have yet made records in this new field of Roentgen diagnosis of carcinoma of the stomach. Their studies followed and were made possible by Rieder's masterly work[3] in the study of the size, shape, movements and position of the stomach.

IMPORTANCE OF USING BOTH THE PLATE AND THE SCREEN

In the investigation of the stomach for carcinoma probably the most valuable evidence is obtained on the fluorescent screen. By it we recognize the moving food, the moving stomach walls, and the constant variations during the process of filling, which are impossible by any other means. On the other hand, the plate will serve to record permanently and accurately the pathologic findings at each step, and will demonstrate finer detail than can possibly be seen on the screen. Therefore, both Roentgenoscopy and Roentgenography should be used in each case. This will, of course, double the time and expense, but no case is thoroughly studied without the use of both methods.

The serious objection to the use of the fluorescent screen is the danger to the operator. Ten men in this country have already sacrificed their lives through this exposure. It is doubtful whether we can eliminate all danger, but certainly all the protection possible should be provided, or fluoroscopy would be better omitted.

Much unnecessary exposure can be eliminated by making a thorough clinical study previous to the Roentgen examination. For this reason the Roentgenologist should be given all the clinical data, so that he may concentrate his attention on the affected region. Often patients and occasionally physicians expect us to look through the patient, as one would look through a window-pane, and see all that is within the integument. For instance, patients are sent because they have pain in the abdomen, with no other clinical data. Then we must hurriedly guess whether the stomach, the gall bladder, the kidney, the bladder or the intestines are most likely at fault and proceed accordingly in making our examination; for the technic for each of these organs is different, and we are likely to obscure the one while examining the other.

DATA FORMING THE BASIS OF THIS PAPER

The data forming the basis of this paper have been obtained from a study of twenty-eight cases in which evidence of carcinoma was clearly demonstrable, and in most of which this diagnosis was confirmed by operation, autopsy or the subsequent clinical course.

It is true that in most instances the disease was well advanced and the clinical evidence of carcinoma fairly strong, but in the majority of cases the tumor was not defined or at all palpable, and in all cases it served definitely to locate the disease and more or less indicate its extent.

This work is still in its infancy and we must collect evidence for the present from all cases, but I feel that later we should be able to make earlier diagnoses, for the evidence shown late should be present to a sufficient degree rather early.

EVIDENCES OF CARCINOMA

The evidences of carcinoma of the stomach may usually be classed as changes in the course of the food through the stomach, or as changes in outline, position, peristaltic movements, or in the mobility of the stomach.

1. *Abnormal Course of the Food.*—The course of the food is probably best studied by watching the first swallow, and for this part of the examination a tablespoonful of a mixture of bismuth subcarbonate and water may best be used. This is then watched carefully as it passes from the upper to the lower pole. To recognize the evidence afforded by this means one must first be familiar with the normal course of the food and the possible changes in the course due to other conditions than carcinoma. Briefly stated, it curves about two inches to the left of the median line and takes the shape of a funnel in the upper third of the stomach, with the point downward, and a small collection of gas (usually swallowed air) under the dome of the diaphragm. From the point of this funnel it moves downward, usually in a straight or only slightly curved line, to the lower pole, which may be located anywhere between two inches above the umbilicus and the crest of the pubes.

When carcinoma is present between the upper and the lower pole of the stomach the food is likely to take an irregular course, as if curving around an obstruction, just as the rivulet curves around a rock. This is best seen when the walls are in contact. When the walls are relaxed or widely separated, as in some advanced cases of gastroptosis, the food drops suddenly from the upper to the lower pole as in an open sack.

Here we must avoid errors, for occasionally extra ventricular conditions, such as a distended kunckle of intestine or the pressure of a tumor from the outside, may also change the course. These, I believe, can usually be differentiated by various manifestations, depending on the ingenuity of the examiner in each case.

This first portion of food can then be watched at the lower pole, as the peristaltic waves carry it forward. Then the stomach should be further distended and the course watched. This evidence can, of course, be obtained only on the screen, and I consider it very valuable.

2. *Gross Obstruction to the Passage of Food.*—This is best illustrated in an hour-glass contraction of the stomach. This is usually evidence of advanced disease, though it may at times be found before palpable signs are present, and even before the symptoms are definite.

Such obstruction can be observed on the screen, and the degree of obstruction can be estimated by finding the size of the smallest portion of food that can not pass. For this purpose I use pills or capsules of bismuth of various sizes, but these pills should be used only after one has observed the degree of delay to the passage of bismuth and water and then the thicker liquid of bismuth and kephir.

One must be cautious in diagnosing hour-glass contraction. There is normally a delay of several minutes

2. Die Radiologische Diagnostik der Intra- und Extraventrikularen Tumoren. Moritz Perles, Vienna, 1908.
3. Fortschr. a. d. Geb. d. Roentgenstrahlen, Feb. 14, 1905.

at the juncture of the upper and the middle third of the stomach. Gross obstruction can not be diagnosed, therefore, until the stomach has been fully distended and until an attempt has been made to crowd food by massage and abdominal contraction from the one segment into the other. Here again, particularly in the middle of the stomach, a distended colon may produce a marked indentation and by intra-abdominal pressure cause considerable delay to the passage of food.

3. *Localized or General Diminution of the Stomach Shadow.*—This diminution of the stomach shadow is usually localized and will be most often found at the pyloric end. There is, in addition, usually some irregularity in shape. Such diminution may at times be seen only when the stomach is partially filled or, again, when nearly empty. This can be understood when one considers that if the tumor occupies either the anterior or the posterior wall without affecting the lesser or the greater curvature, the evidence of obstruction or diminution of shadow would be seen only at a certain stage during which the opposite wall is in contact with the tumor. After the stomach is fully distended a sufficient layer of bismuth will overlie the tumor and obliterate the differentiation.

When such evidence is first observed, while the stomach is partially filled, an attempt should be made to carry food into the affected area by massage. If this is impossible the evidence becomes stronger.

4. *Abnormal Contour.*—Anywhere along the greater or the lesser curvature there may be a tumor. This would ordinarily cause an indentation in the shadow cast by the bismuth contents of the stomach. Such indentation should first be observed on the screen. It should be constant and not obliterated by massage or peristaltic action or respiratory movements. It should then be recorded on the plate, where finer detail and, at times, the indentations of the growth itself may be observed. In order to make such a fine detailed record the exposure must be made in a few seconds, usually under five, so as to eliminate the effect of respiratory and peristaltic movement. Such short exposures require powerful currents, and powerful currents burn up tubes very rapidly, thus decidedly increasing the expense.

We must avoid the error of interpreting an indentation into the gastric shadow as carcinoma when produced only by a distended knuckle of intestine. Such indentation is smooth and is usually found on the greater curvature at about its middle or upper portion.

So, too, a strong and slowly moving peristaltic wave, if not observed on the screen and seen only in one plate, may lead to an error. When in doubt, the examination should be repeated.

5. *Interference with the Peristaltic Wave.* — Peristaltic waves in general are plainly observed only in the lower third of the stomach, and best when the stomach is only partially filled or, again, when nearly empty. Their depth and frequency vary considerably in different individuals. They serve as evidence of carcinoma when they are plainly visible and are seen to stop at a certain point either on the greater or the lesser curvature. The evidence becomes stronger if they can be seen to begin again further along on the border of the stomach.

6. *Abnormal Position or Immobility of the Stomach.* —The stomach may be drawn by adhesions or crowded out of its normal position by the tumor mass. Adhesions may even twist the stomach so as to divide it into two distinct portions and give the effect of an hour-glass contraction. Such effect was observed in a case of Dr. Rodman's, in which it took the bismuth-kephir mixture nearly half an hour to pass from the upper to the lower segment of the stomach. The stomach itself was a very large one, so that the lower pole extended nearly to the pubes. The carcinoma was found on the lesser curvature, near the pylorus, with adhesions to the liver higher up, which twisted the stomach and divided it near its middle.

Adhesions below or anteriorly will render the stomach less mobile, but one must bear in mind that with large stomachs and relaxed abdominal walls, the mobility is not great. I usually depend on abdominal contractions to move the stomach, though pressure with the hand may be used. Such evidence is best obtained on the screen, but some evidence may be obtained by plates, if one takes a postero-anterior view with the patient in the erect posture and an antero-posterior view with the patient in the supine posture (lying on the back).

7. *Abnormal Evacuation.*—In two cases I have observed the stomach contents passing directly into the duodenum almost as fast as they entered at the cardia. This I interpreted as being due to a patulous pylorus. I believed that induration of the walls of the stomach prevented the pylorus from contracting and closing the orifice. One patient (Dr. Daland's) died in a few months with all the characteristic symptoms of gastric carcinoma, but there was neither an exploratory operation nor an autopsy. The other patient (Dr. Anders'[4]) was operated on by Dr. Rodman, confirming in every particular the Roentgenologic findings.

There may also be great delay in the evacuation of the stomach due to pyloric stenosis. Here again we must be cautious, for I have observed, in cases of marked gastroptosis in which there was no pyloric stenosis, retention of food as long as eleven hours. Retention of food can be interpreted as due to carcinoma only when it is combined with other evidence, both clinical and Roentgenologic. Generally the food should be followed through the bowel to detect other possible involvement, due either to malignant disease or adhesions.

GENERAL TECHNIC

The technic can be given only in a general way, for in the study of a case one step leads to another and good results will often depend on the ingenuity of the operator.

1. *Position of the Patient.*—This will, of course, vary much with the individual patient, and several positions are often necessary to confirm or to demonstrate more clearly. Generally the standing posture, with the abdomen against the plate or screen, will give the most evidence, probably because in this position the stomach is more stretched out, and because we can best watch the passage of the food, which is conveyed downward both by gravity and peristaltic action.

A position with the patient lying on the abdomen for postero-anterior view will probably be the next most valuable. Then one can easily, with the patient either in the erect or recumbent posture, change to the oblique or posterior views.

2. *The Bismuth Mixture.*—At the very beginning of the examination it is usually best to use a tablespoonful of a mixture of bismuth and water. This will give the greatest density with the greatest fluidity, and it can,

4. Pennsylvania State Med. Jour., November, 1908.

therefore, be best followed in a tortuous course and into the crevices; but one must not use too much of this mixture for fear of the water becoming absorbed and leaving the bismuth in hard masses.

For general use and for further distention of the stomach I have found a mixture of bismuth and kephir (or yolak), previously described,[5] to be most serviceable, since it keeps the bismuth in almost perfect suspension and is easily digested.

The remainder of the technic, with regard to the management of the tube, the apparatus, the dress of the patient, the patient, and the plates, will be similar to that used in other abdominal examinations.

CONCLUSIONS

1. Gastric carcinoma is demonstrable when it changes the course of the food through the stomach, when it decreases the volume, interferes with peristaltic action, fixes or displaces the stomach, causes an indentation in the stomach wall, or modifies the rate of evacuation of the gastric contents.

2. I believe that with this aid a diagnosis can be made earlier than has heretofore been possible.

3. As a rule it is a tedious and expensive study, and therefore each case should be studied well first clinically.

4. Great caution and thoroughness will have to be observed, or errors will be made, and this valuable method of investigation will fall into discredit.

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A CHAPTER IN THE HISTORY OF QUACKERY

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We are likely to think that quackery is comparatively new, or at least fostered by popular education, and that unscrupulous struggle for success which is sometimes considered a characteristic of our times. I have been rather interested, however, in tracing out a series of chapters in the history of quackery which show that the methods, the ways, the motives and the character of the quack have been about the same from time immemorial, in all countries of the world. We might think, for instance, that the quack of the occident would be quite different from the quack of the orient; but much evidence—among other things, a little story in the Arabian Nights—shows how many of the characteristics of the quack persist to the farthest limits of space and time.

The Arabian Nights themselves—that is, the series of stories which we know by that name—were given a definite collective form (probably by a single writer) at some time during the fifteenth century. However that may be, the individual tales are undoubtedly of unknown antiquity and derived from widely scattered sources. Variants are found in the folklore of Egypt, Syria, the valleys of the Tigris and the Euphrates, Persia, India and even distant China and the remote center of Africa. One of them, the story of the clever thief, was retold by Herodotus nearly 500 years before Christ; and he knew that it was old in his time. It may be that some of these stories represent the oldest tales that mankind has, and that many of them come from that central plateau of Asia where very probably the human race originated. It is all the more interesting then to find among them the following characteristic story of a quack with all the traits that we know so well to-day.

THE WEAVER WHO BECAME A LEECH

Once upon a time there was a man in Persia who wedded a woman of rank higher than himself and nobler of lineage, who had no guardian to preserve her from want. She was very loath to marry one who was beneath her; yet she wed him because of need, and took of him a bond in writing to the effect that he would ever be under her order to bid and forbid and would never thwart her in word or in deed. Now the man was a weaver and he bound himself in writing to pay his wife ten thousand dirhams in case of default. After such fashion they abode a long while till one day the wife went out to fetch water and saw a leech who had spread a carpet hard by the road, whereon he had set out great store of simples and implements of medicine and he was speaking and muttering charms, while the folk flocked to him from all quarters and girt him about on every side.

The weaver's wife marveled at the largeness of the physician's fortune and said in herself, "Were my husband such a one he would lead an easy life and that wherein we are of straightness and poverty would be widened to him."

When she went home she said to her husband, "Verily my breast is narrowed by reason of thee and of the very goodness of thine intent; narrow means suit me not, and thou in thy present craft gainest naught; so either do thou seek out a business other than this or pay me my rightful due and let me wend my ways."

Her husband chid her for this and advised her to take patience; but she would not be turned from her design and said to him, "Go forth and watch yonder physician how he doth and learn from him what he saith." Said he, "Let not thy heart be troubled; I will go every day to the session of the leech."

So he began resorting daily to the physician and committing to memory his answers and his jargon.

Then he returned to his wife and said to her, "I have stored up the physician's sayings in memory and have mastered his manner of muttering and diagnoses and prescribing remedies, and I wot by heart the names of the medicines and of all the diseases, and there abideth of thy bidding naught undone; so what dost thou command me now to do?"

Quoth she, "Leave the loom and open thyself a leech's shop."

"But," quoth he, "my fellow-townsmen know me and this affair will not profit me, save in a land of strangerhood; so come, let us go out from this city and get us to a foreign land and there live."

And she said, "Do whatso thou wilt."

Accordingly, he arose and taking his weaving gear sold it and bought with the price drugs and simples and wrought himself a carpet with which they set out and journeyed to a village, where they took up their abode. Then the man fell to going round about the hamlets and villages and outskirts of towns, after donning leech's dress, and he began to make much gain. Their affairs prospered and their circumstances bettered; wherefore they praised Allah for their present ease. In this way they lived and wandered from country to country, sojourning for awhile in one town and another, till

5. Physiologic and Clinical Observations of the Alimentary Canal by Means of the Roentgen Rays, THE JOURNAL A. M. A., Dec. 21, 1907, XLIX, 2069.

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they came to the land of the Romans and alighted down in the city thereof wherein was Galen the wise physician; but the weaver knew him not. So he fared forth, as was his wont, in quest of a place where the folk might be gathered together, and hired the courtyard of Galen himself. There he laid his carpet, and spreading out on it his simples and instruments of medicine, praised himself and his skill and claimed a cleverness such as none but he might claim.

Galen heard that which he affirmed of his understanding, and it was certified unto him and established in his mind that the man was a skilled leech of the leeches of the Persians, and he said in himself, "Unless he had confidence in his knowledge and were minded to confront me and contend with me, he had not sought the very door of my house, neither had he spoken that which he hath spoken."

And care and doubt got hold on Galen; so he drew near the weaver and addressed himself to see how his doings should end, while the folk began to flock to him and describe to him their ailments, and he would answer them thereof, hitting the mark one while and missing it another while, so that naught appeared to Galen of his fashion whereby his mind might be assured that he had justly estimated his skill.

Presently up came a woman, and when the weaver saw her afar off he said to her, "Is not your husband a Jew and is not his ailment flatulence?" "Yes," replied the woman, and the folk marveled at this; wherefore the man was magnified in the eyes of Galen, for that he heard speech such as was not of usage of doctors.

Then the woman asked, "What is the remedy?" and the weaver answered, "Bring the honorarium."

So she paid him a dirham and he gave her medicines contrary to that ailment and such as would only aggravate the complaint. When Galen saw what appeared to him proof of the man's incapacity he turned to his disciples and pupils and bade them fetch the mock doctor, with all his gear and rugs; and accordingly they brought him without stay or delay. When Galen saw the weaver he asked, "What drove thee to do that which thou dost?"

So the weaver acquainted the wise Galen with his adventure, especially with the marriage settlement, and the obligation by which he was bound with regard to his wife, whereat the sage marveled.

Then he entreated the weaver with kindness and took him apart and said to him, "Expound to me whence thou knewest that the woman was from a man, and he a stranger and Jew, and that his ailment was flatulence?"

The weaver replied, "'Tis well. Thou must know that we people of Persia are skilled in physiognomy, and I saw the woman to be rosy-cheeked, blue-eyed and tall-statured. These qualities belong not to the woman of Rome; moreover, I saw her burning with anxiety, so I knew that the patient was her husband. As for his strangerhood, I noted that the dress of the woman differed from that of the townsfolk, wherefore I knew that she was a foreigner; and in her hand I saw a yellow rag, which garred me wot that the sick man was a Jew and she a Jewess. Moreover, she came to me on First Day; and 'tis the Jew's custom to take meat puddings and food that hath passed the night and eat them on the Saturday, their Sabbath, hot and cold, and they exceed in eating; wherefore flatulence and indigestion betide them. Thus I was directed and guessed that which thou hast heard."

Now when Galen heard this he ordered that the weaver be given the amount of his wife's dowry and bade pay it to her and said to him, "Divorce her."

Furthermore, he forbade him from returning to the practice of physic and warned him never again to take to wife a woman of rank higher than his own; and he gave him his spending money and charged him to return to his proper craft.

HAEC FABULA DOCET

We have here the eternal underlying factor in the success of the quack: his readiness to promise absolutely to cure anything and everything. His apparent self-confidence is so unbounded that even the skilled physician begins to wonder whether the quack has not some secrets not possessed by the profession. When the physician gets a little closer to the quack, however, he finds that the main elements in the latter's success, besides his confidence-inspiring boasts, are his knowledge of human nature and his skill in playing on foibles and credulity. As a rule the medicines he gives, like those of the weaver-leech, are such as do harm rather than good, but yet is the quack in honor and the money he makes is far beyond the amount earned by the regular physician. The real motive for the leech's change of occupation is similar to that of the quack to-day: that he may have a more dignified occupation, make more money and live up to his wife's idea of social station. Galen's method of managing the quack is that which we have found necessary in modern times. We have had to investigate the methods of the quacks and their supposed new discoveries and then we have had to arrange that they should no longer be allowed to exploit the public.

The whole story is as true to human nature in the twentieth century as it was in the fifteenth, or perhaps in the fifth century B. C., when Herodotus may have heard during his travels a version of it with some forerunner of Galen as the learned physician in the case. Men do not differ much in essentials from age to age; and the history of quackery has many other chapters like this that show how enduring are the best and worst in human nature, and how superficial the changes produced by environment.

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THE TREATMENT OF FRACTURES; SOME PRACTICAL POINTS *

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The most important step in the treatment of fractures is that the surgeon shall have made a diagnosis of the condition which he is about to treat. To undertake the treatment without an adequate picture in one's mind of the bony lesion present detracts materially from the satisfaction in one's work and conduces sometimes to poor results, on the one hand, or to unnecessary confinement of the patient, on the other. So important is this that when the surgeon is not able to satisfy himself as to the full character of the injury by means of

* Read before the Associated Physicians of Long Island, Garden City, Oct. 31, 1908.

the ordinary methods of examination, the two artificial diagnostic aids should be called on, and either general anesthesia or the *x*-ray employed.

Still, the old and simple methods of diagnosis are of the greatest value. In many of our hospitals young men are subjecting all their fractures to the *x*-ray for diagnosis. This is most valuable for corroborating the diagnosis, for bringing out the details, or for clearing up difficulties; but to employ the *x*-ray *de novo* as a routine, results in a blunting of their diagnostic sensibilities and places them at a disadvantage when required to treat fractures when they have not access to the *x*-ray.

Let us not fall into the error of thinking that, because this subject of fractures is one of the oldest branches of surgery and deals with the commonest of surgical lesions, it has attained to anything like its ultimate perfection. It is still in the hazy stage of development. I have no hesitancy in stating that some of the newer and more dramatic branches of abdominal surgery are more nearly perfected than is the surgery of fractures, which has occupied therapeutic ingenuity from a time antedating recorded history.

The surgeon does wisely to think of a fracture as a wound—a wound of bone—which in its treatment and healing is amenable to the same rules that govern the healing of wounds in other parts of the body. The more widely the wound surfaces are separated the greater is the damage to the blood and lymph channels and to the nerves. The more mobility there is the greater will be exudate and swelling. Conversely the sooner and more accurately the wound surfaces are brought together and retained in apposition the less will be the swelling and the more perfect the healing.

We have not only to think of the wounded bone, but of the structures which lie in relation to it. The muscles play an important rôle, but muscular resistance is often regarded as the obstacle to reduction when the trouble is due really to the interposition between the bone ends of fascia, of a bundle of muscle, of a clot, or of periosteal tissue, which the *x*-ray does not reveal. When manipulation does not force such fractures from their entanglements, a satisfactory result is best secured by operation. Unless operated on these fractures are the ones which give delayed union or non-union.

There is much misconception of this question of non-union. Students are taught much about constitutional weakness, old age, and lack of earthy salts in the blood; but these, in my judgment, are insignificant. The vast majority of cases of non-union are due to the conditions just narrated. Given broken bone surfaces held in close apposition, bone to bone, and they will grow together, just as they do in fractures of the skull; but let soft tissues be interposed and the patient is a candidate for the so-called non-union—and a diet of oyster shells and parlor matches will not alter the case.

Swelling is another important consideration. It is due to exudation, 1, from the wounded bone surfaces and, 2, from the surrounding soft tissues which are injured by bone fragments or by loss of support. We may put it down as a pretty general rule that this swelling is in direct proportion to the amount of mobility. The exudate from the bone itself amounts to but little. Most of it is from the damaged blood channels of the neighboring soft tissues. The swelling in fractures of the skull is inconsiderable, notwithstanding that the total area of bone surface involved is commonly more than in fractures in the leg or arm, and the vascularity greater. The reason for this is the natural immobility of fractures of the skull. For these reasons the best results in the treatment of fractures will be secured by early immobilization. The sooner a fracture is reduced, its bony surfaces brought into apposition and held immovably, the less will be the swelling and the more satisfactory the result.

There is a prevalent notion of waiting until "the traumatic reaction has subsided." This ancient phrase rolls off the tongue sonorously and sounds important—we have heard our teachers and the men we venerate use it. But there is traumatic reaction going on all the time as long as the bones are out of place or so long as they are movable. There is also an ancient practice of deferring serious treatment until "the swelling has gone down" (another legacy from the dead past). If we can effect immobilization soon enough, the swelling will not come up. Lead and opium and other embrocations have no place in the modern treatment of fractures.

In most hospitals, however, when a fresh fracture of the tibia and fibula is brought in, it is put up temporarily in a vast amount of cotton and basswood splints in such a way that the bones are not immobilized. Swelling is expected, and the expectation is fulfilled. After the muscles, tendon sheaths and nerves have been infiltrated with exudate for a week or so the serum is sufficiently absorbed for the leg to be properly immobilized.

Can anything better than this be done? I think there can. For many years it has been my teaching and practice to correct deformity and permanently immobilize such fractures as soon as possible. When the fracture is seen within two to twelve hours after the accident there is usually no swelling present. I am in the habit of drawing a long white cotton stocking over the leg and applying plaster of Paris immediately over this. It does not require a heavy covering with the plaster bandage to immobilize the fracture. It need not be more than one-eighth of an inch thick. It is important that the bandage next to the stocking be applied without folds and with the most perfect possible evenness. No reverses should be made. The bandage should be allowed to run out flatly, and when it is wished to change its course it should be cut and started in the direction desired. If you want an idea of the difficulty of doing this properly examine the ridges and unevennesses to be seen on the inside of the ordinary hardened plaster cast after it is removed.

A thin cast applied over the stocking conforms to the shape of the leg and allows of an estimate of the lines and contour which can be compared with the other limb. A good plan is to cut through this cast on either side so as to divide it into an anterior and posterior half. This can be done before the last banadage is applied, and while the plaster is still soft, by using a sharp scalpel or bandage scissors. Then the final bandage is put on. Later when the cast is hard, if it is desired to inspect the leg, it is an easy matter to cut through the outer bandage, following the underlying crack, and lift off the front half of the splint. This operation is facilitated by employing two stockings instead of one, and, at the first cast-cutting operation, dividing the outer stocking, which is adherent to the cast, and leaving the under stocking intact.

Putting up a fracture immediately after its occurrence is not usually regarded as good surgery. It is not

good surgery if the cast is not put on well. But if it is smoothly applied and the apposition is good there will be no further swelling, provided there is no extraordinary condition present, such as imperfect reduction, rupture of large vessels, or venous obstruction. After such immobilization the leg should be free from pain. There should be no throbbing or discomfort; if there is, the chances are that the reduction is not good. Such a splint should never be left on in the presence of pain. It is very rarely that pain is present after this treatment.

Now, I do not promulgate this as the best routine treatment of fractures of the lower extremities. To do so would be as wrong as to say that every fractured patella should be sutured or that every inflamed appendix should be operated on. That would be a dangerous teaching. What I do say is that in experienced and skilled hands this is the best treatment.

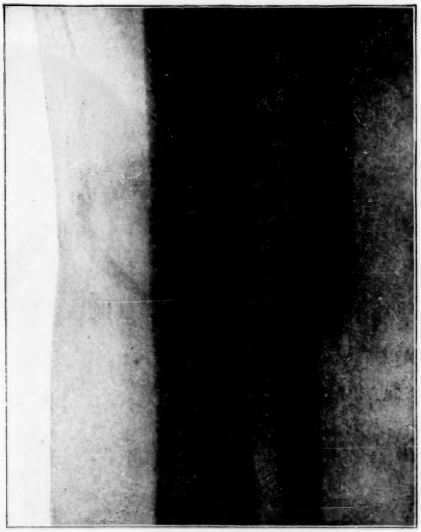

Fig. 1.—Fracture of tibia and fibula in plaster case. Position corrected with the aid of the *x*-ray. Best possible correction. Observe lateral displacement of fibula and loose fragments of bone.

Another matter to which attention may be called is the manner of extension in fractures of the thigh. In the ordinary fractures about the middle third of the femur, the overriding of the fragments is considerable, but there seems to be little appreciation of the great amount of force required to overcome the muscular contraction and bring down the fragments into place. Under the best conditions there is rarely a complete correction of the overriding. Fortunately, most fractures of the shaft of the femur are oblique and the broken bone surfaces slide over one another, longitudinal shortening causing but little lateral displacement. When the fracture is transverse the overriding produces lateral displacement equal to the diameter of the bone, often interposes more or less soft tissue and becomes a more serious thing. In order to overcome these longitudinal displacements in a man an extension which is more than the patient can tolerate is necessary. If the fracture is oblique, twenty to forty pounds will nearly correct the overriding; if it is transverse, that amount will not bring the bone ends into apposition either with or without the use of a general anesthetic.

What I desire to call attention to particularly is that the time to apply this extension to accomplish results is

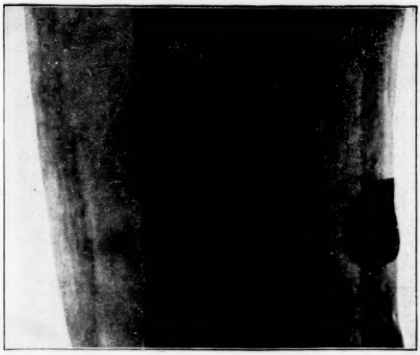

Fig. 2.—Fracture of lower end of tibia in plaster case. Presumably in good position. Observe lateral displacement and overriding.

immediately after the accident. Every hour adds to the infiltration, with serum, blood and leucocytes, of the connective tissue, fascia and muscle about the fracture, and diminishes the elasticity of these tissues. What can be done by twenty pounds of traction in the first twelve hours can not be done by forty pounds after the third or fourth day. Dr. Stimpson's proposition to

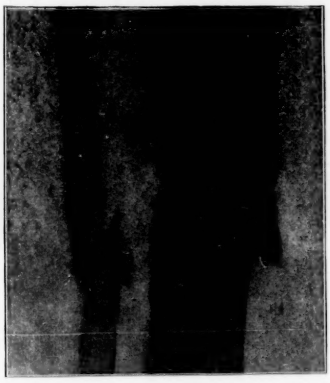

Fig. 3.—Fracture of tibia and fibula in plaster case. Presumably good position. Observe lateral displacement, angular displacement and shortening.

tire out the muscles by traction does not work here. Instead of relaxing, the tissues become more resistant. Still, I have seen surgeons begin with a moderate amount of extension, then after a few days measure the legs and find shortening and add five pounds, continu-

ing to repeat this until by the end of a week or so they get up to an amount of extension which if applied on the first day would have done much good, but which on the seventh day is ineffective. The time to put on the maximum extension is at the very first—from twenty-five to forty pounds in a man—then at the end of a week, ten days or two weeks, this extension can be reduced, or even sooner if necessary.

The *x*-ray has revolutionized our conception of fractures. A broken bone was once thought of as a simple mechanical matter to be considered in the same light as a broken stick or other broken object, the treatment consisting naturally of putting it back into position and keeping it there until it could grow together. Then came the callus, like a plumber's "wiped" joint, and sealed it together. There is still in the public mind an unfortunate practice of thinking of a fracture as a matter of the bone alone, when in truth so many other structures are involved that the bone is but a single part of a pathologic complex.

The *x*-ray has shown that an accurate replacing of fragments is rare. It is unfortunate that the public expects a perfect piece of joining from the surgeon, who works on an unseen structure covered by muscles, vessels and nerves, which often make it even impalpable. When we secure a perfect functional result we permit the idea to prevail that we have done a perfect piece of joining. Let us not forget that a perfect functional result is compatible with an imperfect piece of joining. In most of the complete fractures of long bones of the leg the apposition is far from correct. Open operation is the only method by which they can be made correct. A restoration of function is the thing we aim at. But we should disabuse the public mind of the idea that that requires accurate apposition.

Many times I have put up fractures of the tibia with the greatest care and been confident that the apposition must be perfect, only to find on *x*-ray examination glaring failures of apposition. Still, good functional results were produced in these cases, but had the patients seen the *x*-ray plates we may be sure that they would have been fearful lest they never again be able to use their limbs. This is one of the values and dangers of the *x*-ray—valuable to the surgeon and patient for the help it affords in permitting the surgeon to know the condition of the bones, dangerous to the surgeon and the patient for its misleading effect on the mind of the latter.

I show here a number of pictures illustrating the importance of the *x*-ray and also the difficulties in securing perfect apposition even when guided by this important aid. Good functional results were produced in all of these cases. It is true that I could present a larger number of pictures showing more perfect apposition,

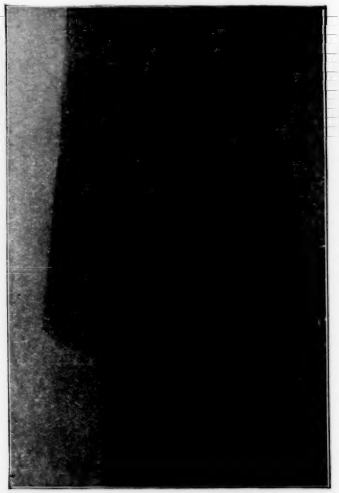

Fig. 4.—Fracture of tibia and fibula in a very fat leg in plaster case. Presumably good position. Observe lateral displacement of tibia.

Fig. 5.—Fracture of shaft of humerus after reduction and immobilization. In apparently good position, but actually with lateral displacement equal to half the diameter of the bone.

but the points which I desire to impress are the following:

1. The perfect reduction of fractures of long bones is difficult and often impossible without operation.

2. Without the *x*-ray we are always in the dark as to the actual conditions present.

3. Reduction with mathematical precision is not absolutely essential for a good functional result.

4. If surgeons would display as much zeal in discussing their imperfect results as they do in presenting their triumphs, our literature would be richer, more practical and of vastly more value, and the public would be less prone to expect impossible things in the treatment of fractures.

386 Washington Avenue.

V 19

BLOODLESS HYSTEROTOMY AND PRELIMINARY LIGATION

AS AIDS TO CONSERVATIVE MYOMECTOMY

ARTHUR E. HERTZLER, M.D.
KANSAS CITY, MO.

The correctness of the general surgical principle to conserve as much as possible has never been questioned, and in the operation on fibroids of the uterus this general dictum has been followed within certain limits. I desire to present a plan of procedure looking to an extension of these general principles as usually carried out.

The factors which have limited the application of conservatism to the affections of the uterus have been fear of hemorrhage and of infection from opening into the cavity of the uterus. There are no longer grounds for the latter fear. We open into the cavity of the uterus without danger of general infection in the radical operation of supravaginal hysterectomy, and the body of the uterus is much less frequently the habitat of pathogenic bacteria than is the cervix.

The chief hindrance to conservatism, then, is the fear of hemorrhage. The difficulty of control of hemorrhage depends on the character and location of the tumor. In subserous myomata conservative procedures are the rule.

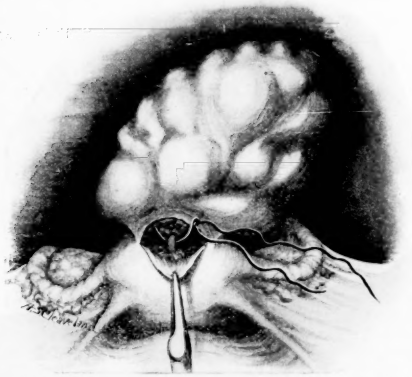

Fig. 1.—Ligation of the blood vessels supplying a tumor of the uterus.

Fig. 2.—Removal of the tumor.

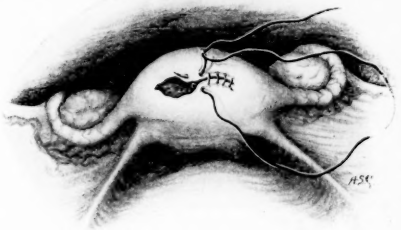

Fig. 3.—Suture of the peritoneal edges.

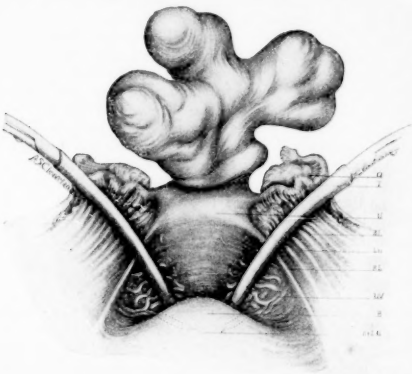

Fig. 4.—Bloodless hysterotomy in multiple tumors with common base. O, ovary; T, tube; U, uterus; B. L, broad ligament; L. U, left ureter; R L, round ligament; U V, uterine vessels; B, bladder; R and L U, right and left ureters.

Fig. 5.—Clamps used in bloodless hysterotomy.

The technic usually employed is to make an elliptical incision about the base of the tumor and shell it out. Hemostasis is secured by passing a number of deep sutures through the wedge-shaped defect thus produced. The loss of blood in the interval between the removal of the tumor and the placing of the sutures is often considerable. The stitch-holes themselves often occasion

troublesome oozing. At best such sutures combine the function of ligature and coaptation, which is always unsurgical.

I have been able in a number of instances, by a scheme of preliminary ligation of the blood vessels, to lessen the hemorrhage in these cases and to avoid the deep sutures, permitting a delicate approximation suture to be used. The scheme proposed is so well represented in Figures 1, 2 and 3 that a detailed description is not needed. The steps are as follows:

1. The peritoneum is incised about one side of the tumor.

2. The tumor is raised out of its bed by blunt dissection sufficiently to reach the point of blood supply.

3. This having been found, a ligature is passed and tied and the tumor severed.

4. The peritoneum is incised the remainder of the way around the base and the tumor removed.

5. The peritoneal edges are then approximated by a running plain O catgut suture.

In many of the tumors the blood supply comes from a single vessel. In others a number are encountered, and each must then be secured by ligation. This preliminary ligation of the blood supply saves the gush of blood which fills the interval between the removal of the tumor and the time of the ligature and permits a more exact approximation of the peritoneum.

In the more deeply situated tumors or those with a more diffuse base or in multiple tumors arising so close together that they can not be attacked as single tumors, it becomes necessary to remove a part of the uterus. Here the area of blood supply is diffuse and does not admit of preliminary ligation. Because of the attendant hemorrhage the exact removal is obscured, which is particularly undesirable when the uterine cavity is likely to be opened.

For this class of cases I have designed what I have designated as bloodless hysterotomy. By it I attempt to secure for the uterus what the Esmarch bandage does for the limb. As shown in Figure 4, the procedure consists in the placing of a rubber-covered clamp on either side of the uterus in such manner as to compress the uterine vessels. All that is required is that the vessels shall be sufficiently compressed to control the circulation but shall not be pressed hard enough to injure the vessel walls. In application of the pressure the same judgment is required as in similar procedures in other situations. The clamps are applied in such a manner that the tip lies in the triangle formed by the ureter externally, the cervix internally and the uterine artery above (Fig. 4). The base of the forceps passes externally to the ovaries and tube. This prevents any undesirable compression of the tube.

The clamps having been applied, the removal of the tumor is proceeded with. If it is necessary or desirable to open the uterus this is done with impunity. When the removal of the tumor is completed the resulting defect is closed by sutures. Usually at least two layers are employed. After the sutures are placed the clamps are removed. If necessary some additional sutures are placed. Before sutures are placed it may be possible to distinguish the lumina of the larger vessels on the cut surface. If such is the case, and it usually is, they are tied separately, as in the amputation of a limb.

The same method is useful for the diagnostic inspection of the uterus in conditions in which curettage is unsatisfactory.

The clamps (Fig. 5) are Moynihan stomach clamps ground to give sufficient elasticity to prevent undue injury to the vessel walls. The curved handles are convenient when the abdominal wall is thin, otherwise the straight Moynihan clamp may be used.

402 Argyle Building.

Special Articles

COLLARGOL (CREDE'S COLLOIDAL SILVER)

REPORTS OF THE COMMITTEE APPOINTED TO CONSIDER THE CLAIMS MADE REGARDING ITS EFFECTS *

MAJORITY REPORT OF THE COMMITTEE

TO THE COUNCIL ON PHARMACY AND CHEMISTRY:

Gentlemen:—The attention of the Council was repeatedly called to certain claims made by the firm of Schering and Glatz for the substance collargolum. These claims were of a most unusual character. If true, they would place the substance in the front rank of therapeutic agents; if unfounded, they would constitute a most reprehensible abuse of the confidence of the medical profession. In view of the importance of the matter, the Council wished to proceed with especial thoroughness. It was decided, therefore, to appoint a committee to consider the question whether exaggerated statements are contained in the pamphlets on collargol that have been distributed by the above-mentioned firm, the agents of the preparation in this country. The undersigned, being four of the five members of the committee thus appointed, beg to submit the following report:

We have been delayed in finishing the report, because it was necessary to give considerable time to it, and, with our other duties, it was impossible to accomplish sooner the amount of work that seemed desirable. Any necessary delay, however, appeared wholly justified by the fact that the question is of very considerable importance, not alone in connection with the substance under consideration, but also because entirely similar conditions prevail with a large number of proprietary preparations, domestic as well as foreign, regarding which extremely optimistic claims are made. Any report such as this may exercise an important influence on similar investigations that are likely to appear desirable in the future.

THE IMPORTANCE OF THE QUESTION

It is manifest to any one acquainted with the situation that the very question that we are asked to settle with regard to a particular proprietary substance is one of extreme importance in its relation to many such substances; for in no way has more harm been done to legitimate methods of advertising articles of this kind, and in no way, likewise, have physicians and their patients been more improperly dealt with, than by advertisements that make apparently well-founded claims, which prove to be more or less completely erroneous, misleading, and often essentially fraudulent, if opportunity is secured to investigate their accuracy. Such practices deserve the severest censure whenever they exist.

At the present time, this is, of course, particularly the case with claims regarding the pharmacologic effects and the therapeutic value of proprietary substances;

* See editorial, page 893, and also Department of Pharmacology.

for it is very easy to make assertions about these matters that are extremely difficult to disprove, even though they are grossly exaggerated or actually false, unless serious attention and much time are given in each instance to an investigation of the basis of the claims. This makes it all the more desirable, however, that, so far as possible, all claims that are very exceptional, such as those made for collargol, should be carefully investigated, and that, if any exaggerations or misstatements are found, these should be handled with great openness. Otherwise much harm will continue to be done to the public, who ultimately pay the money cost of these preparations, and whose health, and even life, suffers when anything is used for therapeutic purposes with an exaggerated impression of its value, more effectual treatment being thereby often excluded. Constant injustice will also be done to the medical profession, because of the deception practiced on it, and to reliable manufacturers, because they must struggle against unfair methods. It is notorious that such practices are employed by otherwise honorable firms, merely because they are so prevalent; but this is all the more reason why we should wish warmly to welcome every opportunity to aid those who adopt proper methods of advertising and keep within the bounds of exact truth, and to distinguish their methods from those that tend to deceive.

CONCLUSIONS BASED ON STUDY OF LITERATURE

The committee has thought it desirable, in this instance, to confine itself, so far as possible, to a critical study of the literature to which the agents of the preparation themselves refer in their advertising matter, going beyond this only in case it should be necessary in order to confirm or disprove questionable claims; for we must repeat that the question before the committee concerned merely the truthfulness of the advertising matter. We were not instructed to prove, to disprove or to define any supposed or actual intrinsic merits of the substance; we were not called on to decide whether the claims made were possible, but merely whether they were based on adequate evidence. Our task, therefore, consisted clearly in the critical examination of the evidence submitted by the agents. We have found it possible to confine ourselves entirely to the literature referred to in Schering and Glatz's pamphlets and to a few references obtained directly from these articles. We have made no actual special search of the literature beyond this, and we have secured no verbal opinions and have ourselves conducted no experiments, and have rigorously excluded the personal clinical experience of the signers of this report, because any conclusions derived from such sources might be thought to depend on the opinions of persons biased for or against the preparation.

Some experiments were conducted for us to test one point, namely, the influence of the preparation on the actual toxicity of bacterial toxins. This appeared to be necessary, since no definite evidence was offered on this point. All the evidence that we have used is, therefore, already in print and, consequently, available to any one in the same form as that in which we have used it, in case any one desires to determine the correctness of what we have to say—excepting only the experiments mentioned, and these are given in the course of this report.

In reaching our conclusions as to the claims set forth in the pamphlets we have read critically more than 100 articles selected from the list of over 300 references in the pamphlets; those which we have read comprising all the evidence offered regarding its pharmacologic effects and all the clinical reports on general infections contributed by clinicians whose professional positions or general standing are such as to make their opinions, whether favorable or unfavorable, of undeniable value. We have also read all other articles by any authors regarding its use in general infections, so far as they were available to us, if particular stress had been laid in the pamphlets on their contributions. The opinions that we shall give are based on the information gained in the way indicated.

THE DISPUTED CLAIMS

Let us now consider the points at issue. The claims to which the Council on Pharmacy took exception and desired to have investigated are essentially comprised in the following statement which appeared in pamphlet that is marked "B," as sent to the committee:

"Collargolum, Soluble Metallic (Colloidal) Silver, is a powerful and harmless systemic antiseptic in the most varied medical and surgical infections. It checks beginning sepses, and often effects brilliant recoveries in desperate ones. Recent investigations show that with its direct bactericide energy it exerts a marked electrolytic [*] and leucocytogenetic action, and thus greatly aids the natural protective forces of the body. In severe infections, collargolum should be injected intravenously or per rectum; but in mild cases, inunctions of Unguentum Credé, 15 per cent. Collargolum Ointment, are indicated. Collargolum and Unguentum Credé should be employed freely as soon as septic symptoms appear. Their prophylactic use is especially advantageous in puerperal cases."

In the pamphlet which appeared in the autumn of 1907, and which was sent to the committee as further evidence of the correctness of the statements, the following appears on the front page:

"Communications from foremost clinics and clinicians of Europe and America demonstrate to certitude that—

"Used prophylactically, it is an almost unfailing safeguard against sepsis from accidental or operative wounds or childbirth,

"Administered early, it usually arrests incipient medical and surgical infections or renders their course briefer and milder,

"Even when employed only as a last resort it sometimes achieves brilliant recoveries in desperate, apparently hopeless cases.

"Whether exhibited intravenously, intramuscularly, rectally, by inunction or locally, Collargolum is entirely harmless. Hence it should be used freely as soon as possible after the appearance of septic symptoms. Delay or timidity in the administration of the remedy endanger the success."

In a pamphlet entitled "New Therapeutic Agents," distributed in October, 1908, claims identical with these last quoted are made, and also the following:

"These therapeutic powers are explained by its catalytic action which destroys toxins, bacteria and diseased cells, by the phagocytic reaction which it occasions, and by its inhibitory influence upon microorganic growth—effects demonstrated by laboratory studies."

Manifestly the claims made in these statements are very remarkable. There is no other drug known that has any widely credited effect on general infections with staphylococci, streptococci, the pneumococcus, typhoid bacillus, tubercle bacillus, anthrax bacillus, and the host of others of the most common forms of infections which are mentioned in these pamphlets as having

* When action was first taken Messrs. Schering & Glatz asserted that the Council misquoted one claim and said "We never asserted that Collargolum possessed a marked 'electrolytic' action." When referred to their own pamphlets for verification, they replied that the word "electrolytic" is "a typographical error for electrocatalytic." Later Schering & Glatz say: "Our friends state that in speaking of the actions of Collargolum the work 'electrocatalytic' should be modified to read 'catalytic' . . ."

been cured by collargol. Infections with some of the higher forms of bacteria (actinomyces, pathogenic yeasts, etc.) appear to be at times favorably influenced by drugs, chiefly the iodids. With several parasitic infections (malaria, syphilis, and perhaps some trypanosome infections) we have special specific drugs for each disease.

Such, in brief, have been our very limited resources in regard to infectious diseases and their treatment with drugs. With the great majority, and this includes most of the common infections, we have had no therapeutic measures of any kind that could rationally be considered to exercise any noteworthy direct control over the infection itself—we have, rather, been confined to measures that help the patient by increasing his resistance and to those that antagonize dangerous symptoms. If the claims regarding collargol are correct, we have in it for the first time a drug that will prevent nearly any bacterial infection if used prophylactically (especially puerperal infections, but these may be due to a great variety of bacteria). It is also said to check existing infections, if used early, and often produces recovery in desperate cases. No distinction is made against any variety of infection—it acts "in the most varied medical and surgical infections."

If this is true, the drug is a tremendous boon to humanity; if not true, these claims are cruelly misleading. No drug on the market that has a reliable standing has had made for it claims so far-reaching as these. The very importance of these claims demands that they should not be advanced without evidence that will withstand critical examination and that is at least reasonably convincing and fairly free from contradiction—at any rate among those writers whose opinions are justly looked up to.

TWO KINDS OF ACCEPTABLE EVIDENCE

The burden of furnishing this evidence rests clearly with those who make such unusual claims. It is, of course, not our province to present new evidence for or against the drug but to examine that submitted. Two kinds of evidence we may be prepared to find convincing: First, careful experimental demonstration that a preparation has properties that justify the expectation that it will produce the effects claimed, this to be followed by a reasonable amount of clinical demonstration that it does produce these effects in the sick human being; second, an overwhelming mass of clinical evidence that, whatever the pharmacologic action, the substance does produce the effects that are claimed. Both these forms of evidence together would be most satisfactory, but the latter alone will do, if the facts are unassailable, for we have repeatedly learned to recognize valuable effects from drugs empirically, and without being able to demonstrate clearly their manner of action.

THE EXPERIMENTAL EVIDENCE

In order, however, that the first method be convincing of such striking effects, the experiments must be extensive and the results must be very positive, and creditable investigators must not be seriously at variance with each other in their facts and conclusions. In order that clinical results shall be dependable, they must be very numerous, and the opinions must be reasonably near to unanimity, and, far more than this, they must be contributed by trained observers, and must show evidence of accurate and critical observation. Without these united characteristics, mere numbers of reports or observations count for nothing, for we well know in how many instances wonderful results have been thought to have been obtained from therapeutic measures that more or less rapidly fell into utter disrepute. Every one, we think, will agree with the conditions we have laid down. We state them here only to indicate frankly the attitude with which we approached the consideration of the testimony.

As to the pharmacologic properties claimed for the drug, those properties, as well as the clinical effects, are most systematically described in the pamphlet issued in 1907 and marked by you "C," and since this pamphlet in its context or in the bibliography covers nearly the whole matter we may devote our attention chiefly to the statements made in it. When any pamphlet is referred to henceforward we shall mean this pamphlet, unless otherwise stated. When references are made to individual investigators to substantiate the claims made we shall, of course, need to discuss the work of these authors from a critical standpoint and comment on it with customary scientific frankness.

COLLARGOL IN THE BLOOD STREAM

In the beginning of the description of the pharmacologic properties, on page 4, it is stated:

"After intravenous injection, collargolum circulates in the blood-stream only a short time; two hours afterward, it is already deposited in the liver, lung, heart, spleen, intestines and kidneys. After eight to ten hours it is present in the blood only in traces;" etc.

No authority is given for the statement that any remains in the blood eight to ten hours after its injection. Cohn (who is repeatedly quoted by the writer of the collargol pamphlet in other connections) states directly that he could find none in the blood after forty-five minutes. The statement in the pamphlet might easily convey the impression that collargol circulates in the blood for eight or ten hours in effective quantity. This is evidently not the opinion of the agents, for, in a typewritten sheet sent to the committee by Schering and Glatz, it is argued that Brunner's results in experiments with collargol, in which the substance was injected after the infection of animals, are incomplete, because "after *an hour* (italics ours) collargol has disappeared from the blood." It is, of course, a matter of great clinical moment whether collargol is effective after one hour or for more than ten hours. The ambiguity is, therefore, very regrettable, though we are ready to believe that no misstatement was intended.

No evidence is given in the pamphlet as to the condition in which collargolum circulates—a matter of very serious importance, it would seem, for all its peculiar combination of harmlessness and great potency against infections is referred to its colloidal nature, and, unless it circulates in colloidal form, this which is emphasized as the only essentially valuable characteristic that it is recommended as having is lost. In your correspondence with Schering and Glatz which you sent to the committee, you inquired about this matter, and they answered that it was a difficult matter to determine, and that they had referred the question to the manufacturers of the substance, the Chemische Fabrik v. Heyden. Later, in their letter of Oct. 24, 1907, having heard from the manufacturers, Schering & Glatz state:

"That collargolum circulates in the body as colloidal silver is shown by Hocheisen's finding., who found that it had precipitated on endocarditic ulcerations in the form of bluish-

black particles. Moreover, if collargol were changed in the body to ordinary silver, or to silver salts, the large doses which are usually employed would inevitably occasion argyria —an effect which has never been seen from it. Hamburger (*Arch. f. physiol. Med.*, 1906, Nos. 2 and 3, pp. 83-97) says that the fact that colloidal silver remains as such in the blood is due to the presence of other colloids, i. e., albumin."

This is certainly not evidence. Hocheisen's observations mean merely that it had precipitated out in some form. Whether this was colloidal silver at the time of its precipitation or shortly before is not determined by his observations. Indeed, he made no attempt to settle this point. The lack of argyria means nothing definite as to the actual form in which the drug circulates, and Hamburger merely expresses an opinion on the basis of analogies with experiments "in glass"—he did not actually investigate the question, and it should be noted also that Hamburger speaks here simply of "colloidal silver," and that in the sentence immediately preceding the portion quoted speaks of how much longer electrolytically prepared colloidal silver remains in the blood than does that which is chemically prepared (collargolum is chemically prepared). We have, in fact, been unable to find any definite evidence as to the form, colloidal or other, in which it circulates, but we might direct attention to the fact that van Waveren (*Weekbl. voor Geneesk.*, No. 10, 1905) is said, in an abstract of his article, to have reached the conclusion, after experimental work, that it is quickly transformed into silver-salts in the blood. The original of his article we were unable to consult. We would also direct attention to the fact that Bamberger, whose paper is referred to favorably in another connection in the pamphlet, states (and this not quoted in the pamphlet) that it is precipitated out after injection, and we must look on collargol as providing in the blood, not a solution, but a large number of actual particles of silver, and he considers that whatever effects are obtained by it are due chiefly to the leucocytosis that these numerous foreign bodies set up. The claim, then, that collargol circulates as such in the blood is not supported by evidence, and any statement that it has been proved that it does so circulate is directly misleading.

ABSORPTION OF COLLARGOL ENEMATA

Further down on page 4 of the pamphlet it is stated that Henri and Gompel, and Loebl, have demonstrated that collargol is absorbed when administered as an enema. Here there is, in the one case, an unjustifiable assumption, and in the other painfully weak evidence. Henri and Gompel, according to the reference given, did not work with collargolum at all, so far as is stated. They used, on the contrary, colloidal silver, electrolytically prepared. This may be the same as collargolum, or it may not; but it is a noteworthy fact that a number of Henri and Gompel's countrymen consider that the effects of the two are different, and actually describe differences that they have observed in the two substances or in their therapeutic or experimental effects. Until conclusive evidence has been produced to show that they are identical, we have no right to assume that the results of experiments done with the one may be accepted as applying to the other, any more than we have a right to assume that many other substances that appear superficially to be alike have the same actual properties until so proved.

Loebl's work is so far from offering satisfactory evidence that it scarcely deserves discussion. His evidence is comprised in the following observations. He administered it per rectum in several cases in which death was sure to occur. We quote from the translation of his article in pamphlet "D":

"Histologic examination of the rectum in the one case, as that of the spleen, liver, kidneys and rectum in the other, showed *no* opaque granules [italics ours] of metallic deposit in either the stained or the unstained specimens. Only the unstained sections of the rectal mucosa in the former case showed the epithelial layer clouded and looking as if it had been dusted over with something; *but it was uncertain whether this was due to absorption or to postmortem imbibition* [italics ours], as the last injection was administered only a few hours before death. In the spring of 1903, however, in a case of erysipelas that died a few days after the last collargolum injection, high magnification showed isolated black granules in the epithelium of the glomeruli, *which were probably* [sic! italics ours] precipitated silver."

We doubt whether any one would be convinced from these observations that collargolum enemata are absorbed!

IS IT ABSORBED BY GASTRIC OR INTESTINAL MUCOSÆ?

It is also said that abundant experimental proof exists of the fact that collargolum is absorbed by the skin, by the subcutaneous and muscular tissues, and by the gastric and intestinal mucosæ. There is some evidence that it is absorbed by the skin and by the subcutaneous and muscular tissues, though Schering & Glatz omit to state here the highly important fact that many of the warmest advocates of the use of the substance insist that its subcutaneous use is impracticable, because of the danger of causing severe local reaction. We have been unable to discover any definite experimental evidence that it is absorbed by the gastric and intestinal mucosæ, though it is stated to be abundant. The closest that we have come to finding evidence is their statement from the October, 1907, pamphlet, p. 4:

"When collargolum is given per os it may be that it is precipitated by the free acid of the gastric secretion, though Beyer thinks not. Even if it is precipitated, however, it again goes into solution when the acids are neutralized by the alkaline intestinal juices."

Who, however, has presented any direct evidence that it actually is absorbed? Who has shown that after being attacked, not only by the hydrochloric acid of the stomach contents, but also by all the other substances in the digestive tract, it is still colloidal silver when it comes to the point of being absorbed, even if it does go into solution again in the intestinal contents? Most drugs, when given by mouth, are absorbed in a different form from that in which they are administered, and we certainly can not assume, without evidence, that this particular drug is an exception. With most drugs the changes that occur are of no consequence, but in this instance we must remember that the original form is of paramount importance in its supposed action. Furthermore, the fact that is repeatedly stated in articles referred to in Schering and Glatz's advertising matter, that colloidal silver, *because of its colloidal character, does not pass animal membranes*, contradicts their other contention that it passes the gastric or intestinal mucous membrane in colloidal form, and it is only in colloidal form that special virtues are claimed for it. Nevertheless, this drug is positively recommended for oral and rectal administration in dangerous diseases. The statement, then, that there is abundant experimental evidence of the absorption of collargolum as such from the alimentary canal is not only misleading but totally unjustifiable.

NOT EXCRETED IN THE URINE

Also it is stated (p. 4) that Baginsky, Buberl and Kunz-Krause have shown the presence of collargolum "in the renal excretion," thus indicating that it is partly excreted in the urine. The facts are, however, that Lange, who worked under Kunz-Krause's direction (this is the article to which the pamphlet refers, Kunz-Krause apparently having done no work on it himself) found it *absent* from the urine, and distinctly so states, and this fact is referred to in several instances by authors whom Schering & Glatz quote in this connection. It may, indeed, be seen in print in their other pamphlet that you have marked "D," in the matter that they quote on page 7: ". . . or, perhaps, as Lange holds, the metal is not excreted in the urine." Buberl states clearly that in three of the four cases in which he found it in the urine there was pyuria, and he considers its presence accidental and due merely to the fact that the leucocytes of the pus had carried some into the urine with them—not that it was excreted by the kidney. Baginsky, so far as we can determine from studying the reference given, made no observations at all on its excretion. This is clearly a direct inversion of the results of one of these authors, a misrepresentation of the second, and pure fiction in regard to the other. These misstatements can scarcely be excused as "justifiable optimism."

EXPERIMENTAL RESULTS IN ANIMALS

Under the heading, "Modes of Action" (p. 4, *et seq.*) the fact is admitted that experiments on animals have not given concurrent results, but this is accounted for as follows:

> "Some of the experimenters have chosen a mode of infecting the animals which is far more brusque than occurs clinically; they have injected intravenously highly virulent bacterial cultures. Moreover, a negative result was to be expected in all cases in which the injection of Collargolum was made before or simultaneously with the injection of the infective material, as eight or ten hours after Collargolum is injected only traces of it remain in the blood. Experimenters who gave the Collargolum injections only when the animals showed signs of severe infection have saved them (Beyer, Pinto). Ernst Cohn's unfavorable report is criticised by Bamberger (Senator's Polyclinic) because Cohn injected the Collargolum before the infective material. Thus, the infection reached the blood at a time when a large portion of the leucocytes was busied with the silver particles and the organism was robbed of an important element of protection. In one case in which Cohn waited until the animal was violently ill, it at least outlived the control."

A critical reading of the papers referred to in this paragraph illustrates this matter from a wholly different standpoint, however. In one or two points the statement quoted above can be looked on only as a misleading mutilation of the work of Cohn, which, in actual fact, is both the most extensive and the most careful work that has been done on this part of the subject. This author carried out experiments on nearly thirty animals. He controlled his cultures carefully, to see that they were actually capable of producing infection. He injected collargol before infecting the animals in some cases, but in numerous instances he injected it after they had been infected. He also infected animals otherwise than by the so-called "brusque" method of injection. In a series of animals he rubbed streptococci into the skin and produced erysipelas, and these animals he treated as follows: One was injected with collargol before infecting it. Of the others, one was not treated at all and was used as a control, while of the remaining two, one, after it became ill, was given collargolum intravenously, the other, after it became ill, was given collargol by injection. It is a somewhat suggestive fact that in this group of animals the control was the last one to die.

Beyer, whose results are repeatedly quoted in contravention of Cohn's, did experiments, so far as one can determine from the report referred to, on no more than three animals. He used no methods to determine how virulent his cultures were, so far as he states (he merely *says* that they were virulent), so that we have no means of determining whether his results were due merely to his having not produced an infection of any severity; the number of observations also is too small to be of any value as against the numerous negative results of more careful studies.

Pinto's paper we have been unable to read, but other authors who abstract it refer to Pinto as having done what is objected to in the work of Brunner and Cohn—namely, that he injected collargolum as a prophylactic. He is approved of because he seemed to get good results. Evidently the judgment of the writer of the pamphlet is governed more by commercial considerations than by scientific consistency. Even if the bias in such a case be unconscious, it is none the less misleading.

To turn back, however, to the criticisms of Cohn's results. In the first place he did not, as is essentially stated, infect animals only by intravenous injections. We have already mentioned that he used other methods also. Further, Cohn's results are criticised in the pamphlet, as are Brunner's experiments in a separate sheet that was sent to the committee, because these authors injected collargolum before or simultaneously with the introduction of infectious material. This is a direct and clearly intentional misrepresentation of Cohn's work, for, as we have noted, he in many instances introduced the infectious material soon after the collargolum. He did it in most instances only ten to fifteen minutes afterward, to be sure, but this is just what Schering and Glatz apparently demand, when they insist that collargolum should not be injected much before the infective material, lest the collargolum disappear before the infective material reaches the blood, for, they say, collargolum disappears from the blood stream within an hour. Certainly ten or fifteen minutes after the infectious agents have been injected into the blood stream these agents and the collargolum ought to meet if collargolum is injected at this time. Furthermore, when Cohn used collargolum before he infected the animals, it was only ten or fifteen minutes before, and Brunner in some of his experiments used it only ten minutes to half an hour before he infected the animals. If within this short period collargolum had escaped entirely from the blood stream, it requires pretty nice judgment to determine whether it does, as is claimed, circulate in the blood stream at all.

COHN'S WORK NOT DISCREDITED

But the most objectionable feature of the paragraph in question is this: Bamberger's criticism of Cohn, which is quoted above, when examined in the original, proves to be very weak and specious, and was apparently prompted by the fact that, unless he could discredit Cohn's results, his own work would have seemed wholly worthless. Bamberger, however, is truthful, in that, in connection with the criticism quoted above, he puts in the qualifying clause, in parenthesis, "This applies, however, only to the experiments with the staphylococ-

cus," thus intimating that there were other experiments to which his criticism did not apply. When Cohn's work is looked at carefully, this intimation appears important and pathetically weakens Bamberger's criticism, for the work with the staphylococcus is really only a small fraction of what Cohn did.

When Bamberger's criticism is translated into this pamphlet, however, the qualifying phrase quoted above has disappeared, and it is now in such form that it reads as if the criticism applied to the whole of Cohn's results and destroyed his conclusions. It implies that Cohn had in but one instance injected collargolum after injecting the animals; while, as a matter of fact, as we have stated, he did this many times. This is an injustice to Bamberger and misrepresents what he said, and it is somewhat worse than a misrepresentation of Cohn. Toward him and toward those who read the pamphlet, it is the opposite of what scientific men call honesty.

ITS PROPHYLACTIC VALUE

There is a further aspect of this criticism that is applied to the work of both Cohn and Brunner, though, as we have said, wholly unjustly to Cohn—the criticism, namely, that when collargolum is injected before infecting animals the results are valueless. Whatever the actual effects on infections may be, this criticism carries the critic himself into perilous channels, for this reason: We are told that collargolum is a prophylactic against infections. A prophylactic is, of course, usually given before the disease occurs; hence, before the infection occurs. On the other hand, we are told here that injecting the collargolum even ten minutes before the animals were infected resulted in the infection reaching the blood "at a time when a large portion of the leucocytes was busied with the silver particles, and the organism was robbed of an important element of protection." This would certainly be a strange and unfortunate sort of prophylactic. In other words, we are told in one place that collargol is an efficient and harmless prophylactic; but when an investigator has tried to use it for this purpose the idea is stamped as absurd. Such inconsistency is reprehensible from the moral as well as from the scientific standpoint.

Finally, regarding this matter, we would also direct attention to the fact that Trommsdorf, who did experiments on twelve animals and who did give his injections not only directly after infecting them, but also six to thirty-six hours afterward, had results that, he states, were absolutely negative. His paper is indexed under the literature of the pamphlet but is not discussed in this connection. Also Baldoni, whose paper is indexed but not discussed, is said by several writers, whose articles are quoted, to have done animal experiments with unfavorable results. His original article was not available to us. It would appear, then, that this question has been attacked from all sides and that the great majority of the experiments have been negative. Indeed, all the investigations that show intrinsic evidence of having been performed with due care are decisively negative. The implied claim that pharmacologic experiments have been, on the whole, favorable is, therefore, entirely misleading.

To go further in quest of the pharmacologic action of collargol: The pamphlet states (p. 5) that "it has no such bactericide effect as the silver salts," and that if it had, "it would then be destructive of cells as well," and hence dangerous. We can pass this over as not offering any explanation of its action. The pamphlet, however, does dwell on its bactericidal action in various connections, and particularly refers to the work that shows that in certain concentrations it restrains the growth of bacteria. Beyer, among others, has especially insisted on the importance of this. We would note in regard to this matter the remarks made by Mann in discussing Beyer's paper (these remarks are not referred to in the pamphlet, though Beyer's paper is referred to repeatedly). Mann says that if Beyer would compare the amounts of colloidal silver necessary to control bacterial processes in the laboratory with the amounts that are used, for instance, in horses, for the purpose of controlling bacterial growth in them, he (Mann) thought that it would appear that in the latter instance something closely approaching homeopathy was being used. There is certainly no evidence that collargol, in the concentration and during the time in which it could exist in the circulation, has any bactericidal action. Statements intended to convey the impression that it has such an action are unquestionably misleading.

ITS ACTION ON THE LEUCOCYTES

Much stress is laid on the fact that collargol produces a transitory leucocytosis. There are differences of opinion on this point also, but the general evidence seems to be in favor of the occurrence of this leucocytosis. We would, however, point out that, as several of the authors referred to in the pamphlet remark, and as is well known, a similar leucocytosis is produced by many drugs. Most of these drugs are not supposed to have the slightest influence on infections, and not one of them is credited with an influence at all like that claimed for collargolum. We may, indeed, state quite positively that at the present day the occurrence of a leucocytosis after the use of a drug is not known to have the slightest definite significance regarding its effects on a general infection; only a few enthusiasts still think otherwise. Hence this effect of collargolum, on which tremendous stress is laid in the pamphlet, can not be considered important. The effect after injection into the spinal canal in meningitis is a different matter. There it produces a local outpouring of leucocytes which may be useful; but, as Widal and Ramond, who did this, remark, the leucocytosis was due to the presence of particles of silver, and they clearly intimate that the effect was not specific in any sense, and that any other inert insoluble substance would have done the same thing.

Finally, we are told, in heavy-faced type, that:

"By reason of its colloidal nature, **it has vigorous catalytic powers, which induce or enhance in the organism the process of oxidizing bacterial toxins, changing these to inert compounds.**"

The evidence for this is said to be that Schade has shown that:

"The electrocatalytic properties of metals, more especially in their colloidal form, may be developed in the living body. They facilitate the interchange of oxygen and hydrogen in the animal tissue fluids, and effect a quick and energetic increase of oxidation in the organism. It is readily conceivable that this may rapidly deprive ptomains and similar bodies of their poisonous character, as atmospheric oxygen does."

We need not devote much attention to this last remark, because it is stated here merely that "it is conceivable," not that Schade has shown it—and Schade actually has not shown it. It is conceivable but it is not to be accepted until evidence has been offered to support it. All the direct evidence given is that furnished by Hamburger, who investigated the effect of collargolum

on the hemolytic action of staphylococcus toxin, Neisser and Wechsberg having stated that the hemolytic properties of the latter provide a reliable test of the activity of the toxin. (The following figures are taken from Pamphlet "B.") Hamburger found that ¼ c.c. of a 1 per cent. solution of collargolum added to 1 c.c. of staphylotoxin serum prevented hemolysis; and from this he decided that it destroys the toxin. He found, however, that it increased hemolysis when ¼ c.c. of a less than 1 per cent. solution of collargolum was used in 2 c.c. of staphylotoxin serum, and the same was true of still weaker concentrations. Does this mean that in these lesser concentrations it increases the activity of the toxin? We do not know, and are not told; but it would rather appear to do this, and certainly did not have a favorable effect.

REDUCTIO AD ABSURDUM

Let us grant that in the higher concentrations it has the influence desired on the staphylotoxin, and perhaps on other toxins, the figures given would, in relation to a human being, mean this: The concentration of (dry) collargolum, when ¼ c.c. of a 1 per cent. solution is added to 1 c.c. of other fluid (in the instance under discussion the fluid was staphylotoxin serum) is 0.2 per cent. Lesser concentrations than this increase hemolysis, according to Hamburger. Hence, to accomplish any good in the blood stream, and in order to avoid doing harm, we need at least a 0.2 per cent. concentration of collargolum in the blood. It has long been said that the amount of blood in the body is about one-thirteenth of the body weight, but more recent studies indicate that this is a little high. In order to be on the safe side, let us make it as little as one-twentieth of the body weight. With the usual so-called average man, who is commonly said to weigh about 70 kg., there would then be about 3.5 kg. of blood or 3,500 gm.; 0.2 per cent. of this amount of blood is 7 gm. That is, we should need 7 gm. of dry collargolum at each dose in order to keep up to the amount that Hamburger's figures demand if we are to do good. The preparation has been used for intravenous purposes most largely in a 2 per cent. or weaker solutions, until in the last few years, when it has been possible to use a 5 per cent. solution with the new collargolum. With the 2 per cent. solution we should need at least 350 c.c. to get the proper concentration in the blood; with the 5 per cent. solution the minimum dose should be 140 c.c.

The amount recommended and actually used, however, has ordinarily been less than 5 c.c.; only occasionally has the use of larger doses been reported, and never, so far as we know, more than 20 c.c. at a dose. Hence, if we follow Hamburger, the use of this preparation against bacterial toxins has not done any good, and, if anything, it would appear, indeed, to have done harm.

In any case the sole basis for the remarkable claim that collargol "has vigorous catalytic powers which induce or enhance in the organism the process of oxidizing bacterial toxins" are these experiments of Hamburger and Hekma, and a little consideration shows that they are totally irrelevant. The experiments were performed *in vitro* and have no bearing on what may occur "in the organism;" they simply show that a toxin (the hemolysin of staphylococci) which so far as is known has little or no pathologic significance is probably destroyed under conditions which do not obtain in the organism.[1] To build such far-reaching deductions on such a slender base of facts is certainly gross exaggeration, if, indeed, harsher terms would not be more accurately descriptive. The claim that experiment has proved that collargol in the body oxidizes bacterial toxins to inert compounds either is dishonest or, at best, shows an uncontrolled imagination which would totally unfit its author for drawing any scientific conclusions.

Some emphasis, further, is laid in the pamphlet on Robin's studies of the effects of colloidal metals on metabolism. In regard to these, we would say again that Robin has done nothing with collargolum, so far as he states; but, on the contrary, he seems to have worked exclusively with metals that were obtained by the electrolytic method, and chiefly with gold, according to the references given. As we have said in another connection, results obtained with colloidal silver prepared electrolytically can not by any means be considered to be results obtained with chemically prepared colloidal silver, namely, collargolum, and certainly the latter can not properly be compared with colloidal gold. Suppose, however, that this could be done; Robin's work is, in the first place, subject to the criticism that, contrary to the first rule in such investigations, it was carried out, so far as is stated, without control of the diet. Aside from this, however, if they mean anything, his results as recorded, indicate chiefly that there was increased tissue destruction; and this, in infectious diseases, is one of the things that we particularly try to prevent. The mere fact that a substance appears to have some sort of effect on metabolism is by no means direct evidence that it has a favorable effect.

This comprises all the matter of importance relating to the pharmacology of collargolum, so far as it is discussed in the advertising pamphlets and so far as we have been able to determine through other sources. It is apparent that this is wholly insufficient to establish or to aid seriously in establishing the very remarkable claims made regarding its effects and value. It seems to us, further, that while in some instances the statements made in the pamphlet are dependent merely on acceptance of insufficiently justified conclusions of the authors quoted, in other instances the statements made are directly the contrary of what the authors themselves have put into print, or they are palpable misrepresentations of the authors. Substantial experimental proof that collargolum has any of the pharmacologic actions claimed for it in these pamphlets is lacking, and this is evidence that the statements made regarding its pharmacologic effects are gross exaggerations. The misrepresentations are, however, to fair-minded persons, even

1. Dr. J. F. Anderson, assistant director of the Hygienic Laboratory, Washington, D. C., performed, at the request of a member of the committee, several series of experiments on guinea-pigs to determine whether collargol has any destructive action either *in vitro* or *in vivo* on a toxin of real importance and one whose toxicity can be determined with accuracy, viz., diphtheria toxin. The treatment of a minimum lethal dose of this toxin with solutions of collargol up to 0.5 per cent. for 2 hours had not the slightest effect on the toxicity; nor did the injection of 1 c.c. of 0.1 per cent. collargol directly into the hearts of guinea-pigs (250 gm.) delay in the least the death of animals which received a single minimum lethal dose of the toxin. We disclaim the intention of attributing to these results a wider significance than they possess. They merely prove that collargol has no action on one of the most important and experimentally most decisive toxins. At the same time, they emphasize the fact that we are not at all justified in presupposing that collargol has a general destructive action on all toxins, or even on most; or, indeed on any toxin. If it has such action, it must be definitely demonstrated with each individual toxin, before claims such as the foregoing can be honestly justified; and, as we have seen, no adequate evidence on this point has even been submitted.

more damaging evidence of the unreliability of the claims made. Whatever differences of opinion may exist as to the clinical significance of pharmacologic effects, everyone must agree that when pharmacologic claims are advanced they must be based on sound evidence. Still more important, they must not be contrary to the evidence, and, most important of all from the standpoint of common honesty, the statements made must fairly present the statements and conclusions of any investigators who are quoted. False claims are equally detrimental to the profession and to the public, whether the responsibility be referred to the house making the claims, to some subordinate, or to a vicious custom.

THE CLINICAL EVIDENCE

It appears to us, then, that we have already sufficient evidence of conflict with the rules of the Council, which do not permit false, misleading or exaggerated statements. Let us, however, consider whether, putting aside the question as to the pharmacologic effects of the substance, there is clinical evidence of an amount and character sufficient to justify the statements regarding its clinical action.

As we have already indicated, we can not accept the standards regarding such evidence that Messrs. Schering and Glatz apparently adhere to. In their letter to you of Sept. 13, 1907, they say:

> "The claims made for collargolum are perfectly justified; they are not in the least 'at variance with the current scientific conceptions of the subject,' but, to the contrary, are substantiated by an enormous literature, as you will see on perusal of the pamphlets on collargolum which we sent you some time ago, and of which we mail you another set under separate cover. Few remedies have a stronger array of testimony in their behalf. We ourselves have record of more than 300 publications, and there are doubtless numerous reports which we have never seen, particularly in French journals."

METHOD OF DETERMINING VALUE

This clearly indicates that if the number of contributions regarding a substance is large, the value of the substance is thereby established. We must very frankly state that we do not agree with this. The number of observations must be large if clinical or other studies are to furnish reliable evidence; but beyond this, and still more important than this, the studies must be made by persons who show evidence of competence, and they must have been done with accuracy and care; and in using the literature to decide a question, adverse statements must be considered with as much open-mindedness as are those that are favorable. If any other course is pursued, multiplication of so-called "evidence" is merely multiplication of error. When any drug has been extensively advertised and very optimistic claims have been made regarding it, large numbers of favorable reports may always be found, whether the drug is valuable or not. If the favorable reports alone are considered and no attention is paid to their reliability or to any unfavorable reports, it would be extremely easy with any drug to reach the conclusion that it is of the utmost value.

Considering the fact that we confined ourselves almost entirely to the literature to which the promoters of this drug themselves refer, it would seem highly probable that we have examined reports that are in larger proportion favorable to it than would have been the case had we searched also for articles to which Messrs. Schering and Glatz do not refer. It should be remembered, however, that our task was not to decide whether the drug has *any* value; if that question could be decided at all it would be only by a consideration of all available literature. What we needed to do was to determine whether it approaches reasonably near to the value set on it in the advertisements under consideration. This we have been able to do by keeping within the limits indicated.

GENERAL RESULTS OF EXAMINING LITERATURE

It is clearly impossible for us to make reference here in detail to all the literature that we have gone over. It will suffice to take up a number of points in the pamphlet and quote a sufficient number of references to show that these points are not substantiated. These references will indicate that there is no *overwhelming* evidence that the substance is "a powerful and harmless systemic antiseptic in the most varied medical and surgical infections," or in any infection; that, on the contrary, when we consult the articles of men of recognized ability and judgment, we find that a very large proportion of them are extremely guarded in their conclusions. We find that, after extensive use of it, many of them decide that collargolum is practically valueless. Furthermore, in articles in which it is warmly recommended as a systemic antiseptic we find often intrinsic evidence that the author is clearly an unreliable enthusiast or that he presents no noteworthy evidence to substantiate his opinion; while in some instances the statements made regarding the benign effects of the preparation are accompanied by others that show such deficient or erroneous conceptions of anatomy, physiology, pathology or other fundamental medical knowledge that we should involuntarily distrust the conclusions reached by the author regarding any medical question.

CONFLICTING TESTIMONY

In addition to this, without searching outside Schering and Glatz's list but merely in looking over the articles referred to in the pamphlet, we have had our attention directed to a number of articles or discussions that directly contradict and give positive evidence against statements made in the pamphlet. Although these articles are quite as available as those that they quote, and the authors of the pamphlets must have been familiar with them, they are suppressed, and the extreme statements made are still permitted to stand. We find, indeed, direct contradiction of some statements in the pamphlet in articles from which they themselves quote, but these unfavorable statements are usually suppressed and the articles are used only in some other connection.

We find instances, likewise, in which statements attributed to an author in society reports (and such reports are generally unauthorized) are used in furtherance of the claims made, while when the original article itself is consulted the author's actual views are found to be much less favorable or actually unfavorable. This clearly misrepresents the author's real views in a way that is entirely unjustifiable.

DISTORTED REPORTS

Furthermore, and much more objectionable than any of the things that we have thus far mentioned, there are repeated instances in which portions of articles are suppressed in such a way as to make carefully guarded and, at most, only mildly favorable statements appear laudatory to a grossly exaggerated degree; and there are

instances in which words are introduced into author's sentences in order to make them more emphatic; and, finally, obsolete views of authors, that they have since corrected in later articles, are given as their present opinions.

Such methods are clearly the opposite of a fair presentation of the subject. The reader of such statements will be deceived in precise proportion to the faith that he has put in the fairness and honesty of the presentation. The higher the standing of the firm that descends to such practices the more serious the offense, the graver the abuse of confidence, and the more positive the harm done. The explanation that the offense is a common practice does not by any means lessen this harm. The principle of "caveat emptor" has no place in science, nor can it be considered laudable, when the lives of human beings may be the price.

Having found these evidences of exaggerated, false and misleading statements in regard to the clinical side of the question, as well as the pharmacologic, we feel that we have answered your question. We will, however, refer to a series of articles that exemplify the points we have made. We will take these points up, not in order, but collectively, since in repeated instances one article illustrates several of our points and we wish for brevity's sake to avoid an unnecessary amount of quoting.

It is stated on page 8 that "Locally collargolum is a *certain*, simple, *universally applicable* surgical antiseptic for the prevention and treatment of sepsis" (italic ours). Hochheisen, however, who is quite extensively quoted in two other connections but not in this, states that during two years, when he was acting as an assistant to Landerer, he used collargol in surgical cases, injecting it under the skin and into the veins, and also applying it in powder form and as an ointment in septic wounds, in infected amputation stumps, in general septic conditions, in peritonitis, in severe phlegmons, in puerperal infections and in tuberculosis. He states: "I could, however, not say that I have seen even one single result that could not have been secured quite as well by the other customary surgical or general treatment that was used." He thinks the intravenous use may have some useful effects on general surgical sepsis. His opinion regarding its local use is, however, clearly positively unfavorable, after a large experience.

ITS USE IN SEPTICEMIA

The drug is particularly recommended for various forms of septicemia and pyemia, erysipelas, and especially in puerperal infections, etc. Let us see what is actually said by some of the persons referred to regarding its use in these conditions: On page 13 it is stated that Professor Tillmanns "says that he has often seen surprisingly good results from the internal administration, injection or inunction of collargolum in phlegmons, lymphangitis, general septic infections, etc." This provides examples of three very objectionable things. The facts are as follows: The reference given is to Tillmanns' "Allgemeine Chirurgie." In the seventh edition of this work, published ten years ago, Professor Tillmanns said Credé recommends this metallic silver, internally, by inunction or by intravenous administration, in the treatment of phlegmonous lymphangitis, general septic infections, in scarlet fever, diphtheria, etc. He then immediately said "no conclusion can yet be reached in regard to the internal antiseptic action of the silver in general infections. I have repeatedly seen surprisingly good results, in other cases it could not be determined that there was any effect." As to later editions of his work, we can not find that there was any eighth edition of the "Allgemeine Chirurgie," though there was one of the "Specielle Chirurgie." In the ninth and tenth editions, however, published in 1904 and 1907, respectively, he says what was noted above as to Credé's recommendations and then alters his previous statement by eliminating any personal opinion whatever and simply says that in human cases and in animals some authors have described good results, while with others the results have been negative. That is, in one short sentence the author of the pamphlet has introduced three very objectionable methods of misleading his readers, methods which are very commonly used in such advertisements.

1. He has used an obsolete edition of the author's work that contained a clause (which the author had deliberately removed from later editions) because this clause could be dressed up into more laudatory form than any in the later editions. This suppression of an author's recent opinion because an earlier one seems more favorable we shall mention in another connection in a still more objectionable form.

2. What Tillmann said ten years ago as to his own opinion is combined with what he said as to Credé's recommendation of the substance, and it is all referred to Tillmanns.

3. A single clause that even in the original (in the ten years' old edition) is guarded in such a way as to make it a most indifferent opinion as to the actual value of the substance is taken out from the context and put into the advertisement in such a form that the author appears to be an enthusiastic advocate of collargol. By using this method almost anything, except violent condemnation of a drug, could be turned into warm praise. It is the more reprehensible because it is one of the commonest ways of misleading readers of advertisements.

Finally, we would note that while the advertisement reads as if Professor Tillmanns had come out with a warmly favorable discussion devoted to collargol, we actually find that all the matter that we have referred to is merely a mention of the substance in fine print, after he has mentioned twenty-five other substances which have been recommended by various authors as substitutes for the usual antiseptics; and when, immediately afterward, he takes up the question as to which of the numerous antiseptics that have been recommended is the most effectual and suitable, he does not even mention collargol, and in discussing the prevention and treatment of septicemia he again does not mention it, but does say "A substance that is an effectual remedy for general septic infection does not exist."

ITS VALUE IN PUERPERAL INFECTIONS

In relation to puerperal infections, let us take up several of the first references given under this heading (p. 13), which are said to attest the effectiveness of the substance in these conditions. The article mentioned as coming from Chrobak's clinic is by Buberl. It is quoted specifically in certain other connections and, as we have already shown, it is falsely quoted in connection with excretion through the urine, but the following statements are not quoted: He says that the reports regarding the clinical effects of collargol are partly posi-

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tive and partly negative, a guarded expression being given by exactly those authors who have the largest amount of material at hand; and he then refers to Fehling, v. Herff, Küstner, Leopold, Osterloh, and v. Rosthorn as being examples of this latter class. Buberl's own work indicated to him that it appeared at times to exert a favorable influence on the course of puerperal fever, but that it is to be considered a specific against sepsis seems, from his experience, to be altogether too enthusiastic a statement.

Döderlein, referred to also, says, on page 43 of his book, simply that it has been recommended that metallic silver be used in impregnating ligatures. Later, on page 161, he says, in discussing the after-treatment of infected wounds: "Here silver in colloidal form and silver salts, used in intravenous infusion or in inunctions, have been recommended by Credé. The experimental basis of this Credé silver treatment is, however, but slight, for no results that are free from criticism have been obtained in animal experiments; though it might be said regarding these observations that perhaps bacteria of too high a virulence have been used for injection, and because of this even an increased power of the blood to check their growth was insufficient. Clinical reports, both with intraveneous and intradermal use, have not been unfavorable. We have ourselves very frequently used the inunction treatment without being able to reach any conclusion regarding it. Unequivocal results that strike the eye at once I have never seen."

As to Fehling, the reference is to a society report, in which it is merely stated that he had good results from the use of collargol. When the actual article by Fehling is looked up[2]—an article to which reference is not given in the index of literature in the pamphlet—it is found that he states that the substance had no bad effect, but the results were very variable. Sometimes the temperature and pulse fell; they generally improved; but there was no definite permanent fall of the temperature after the injections. As to whether any cures were due to its use, he says that he feels extremely guarded. A number of patients died and a number got well. Possibly the bad issue was sometimes postponed. Further clinical studies should be made to determine its value, but he thought it worth while at that time to continue testing it.

Harrison is correctly quoted as saying: "If one does not use collargol in those severe forms of infection, one has not done one's duty." This extremely pronounced view does not appear to us to be based on much experience. In the references given Harrison reports, so far as we can see, only two—or, at most, three—cases, one of these being from the notes of a hospital resident physician. In one of these it appears that collargolum was unable to prevent the advance of the general sepsis and the formation of an extensive local abscess and arthritis, and the condition improved only after the abscess had been opened and drained. Nevertheless, collargolum is lauded because the abscess cleared up with great rapidity after having been opened.

Osterloh, who is not referred to in the advertising matter of Schering and Glatz, though repeatedly mentioned in articles that they do quote, says[3] that he had already shown the uselessness of the ointment in severe sepsis, and then describes some cases in which he used intraveneous injections with apparently favorable influence on the temperature but no influence in controlling the disease. Three patients died and the others recovered only after the silver treatment had been stopped and other suitable surgical treatment had been instituted.

2. München. med. Wchnschr., 1903, p. 1409.
3. Wchnschr., 1902, No. 21, p. 896.

COLLARGOL IN ARTICULAR RHEUMATISM

Witthauer is very favorably referred to in some typewritten sheets[4] sent to the committee by Schering and Glatz. He had previously reported in a laudatory way in regard to the use of the substance in puerperal pyemia, and states that he has recently used it in articular rheumatism. He describes a series of cases in which he thinks the results were very good; but he makes the naive statement that if a case does not improve under the use of this substance, one may decide that either it is gout or a mixed form of arthritis, or that there was some complication present that prevented the action of the collargolum. He states that there were cases that he does not report in which "collargolum did not work so promptly and so strikingly, because mixed infections were certainly present, and new complications persistently appeared." Evidently this author modifies his diagnosis directly in accordance with the effects of collargolum, which makes his conclusions more than a little unreliable. In connection with its supposed action in pneumonia it is interesting to note that Witthauer supports his contention that it acts *in the right kind of rheumatism* by showing that in a case that it did not help the patient developed pneumonia while it was being used. He considers the pneumonia responsible for its lack of influence on the rheumatism. He also says that true streptococcic articular rheumatism may be successfully treated with collargolum, and may even be diagnosed through the collargolum treatment, because the latter is always effectual in this condition. This is rather too much of a discovery. There has been no determination as yet that articular rheumatism is definitely a streptococcic disease. To make a diagnosis of a condition by a therapeutic test before the existence of this condition is known to be a fact is surely a remarkable feat.

In the same number of the same journal, however (this is not mentioned by the promotors of the drug), Jung, writing from the Frauenklinik in Greifswald, after speaking of various measures used in the treatment of puerperal sepsis and mentioning antistreptococcic serum encouragingly, says: "The experiences with Argentum colloidale Credé in puerperal sepsis have been less favorable. In regard to this substance also there are a great number of favorable, but likewise some unfavorable, reports, and in our experience in Greifswald it has not proved satisfactory. We have, as have many other observers, repeatedly seen high access of fever and severe chill appear first after its use." After describing the disadvantages attending on its intravenous use, he says: "These difficulties make the procedure seem but little suited to the use of the practitioner, and, furthermore, as already noted, we have not had any favorable results to record. The percutaneous use of collargol, which was earlier practiced, has proved to be entirely without effect and is indeed very generally discarded."

Lenhartz, who wrote on sepsis in Nothnagel's "Specielle Pathologie u. Therapie," and whose authoritative article is repeatedly referred to by others who are quoted in the pamphlet, though not given in the list of liter-

4. Med. Klinik, 1907, No. 42.

ature in the pamphlet, states: "Whether colloidal silver, recommended by Credé, promises any permanent cures I hold also to be very doubtful. However, it appears in the dose ordinarily used to be harmless. Wenckebach considers that after intraveneous injections of 12 to 15 mg. of the silver in 1 per cent. solution good results were seen. For myself, after many personal experiences, I can not confirm this favorable action." Again, in speaking of its use in puerperal sepsis, he says: "We ourselves have seen nothing worthy of comment as a result of its use."

ITS UNTOWARD EFFECT

The opinion that it causes no dangerous effects is not shared by everyone. Rittershaus[5] is correctly referred to in the pamphlet as describing such good results in erysipelas that he thinks it must be looked on as having a directly healing influence in this condition; but no space is given to another article by Rittershaus, written a year later (the authors of the pamphlet are evidently familiar with this article, because they index it in their list of the literature), in which Rittershaus says that, after further experience and further consideration, he would note that he has repeatedly had periphlebitic infiltrations and abscesses formation as the result of intraveneous injections, and has repeatedly seen severe cyanosis and dyspnea immediately after its use, which *probably indicated embolus of the lung.* He also frankly notes that his more mature opinion is that the effects in erysipelas and pyemia are by no means so valuable as they at first seemed to be. While it appeared to have an influence in some cases on the temperature, general condition and local disease, he believes that it is impossible to attribute much effect to it because of the great variability of the ordinary clinical picture of such conditions, and he frankly states that, contrary to his previously expressed opinion, he thinks that up to the present no specific against erysipelatous conditions has been found. As to general septic processes, he would repeat the statement made in his previous paper, that no permanent results were obtained from the use of collargolum in these conditions.

Hochheisen is quoted most extensively in connection with its use in puerperal conditions. We would note one point as regards the quotation from this author; the first sentence as given in the pamphlet is: "Collargolum is an invaluable aid in suitable cases." A correct translation of Hochheisen's words here is: "Collargolum is an aid in suitable cases." Again there appears to have been a spontaneous generation of a word, which we can scarcely consider justified even for advertising purposes, since this is a direct quotation, in quotation marks.

Bonnaire and Jeannin,[6] who are considered by Schering and Glatz to have given an entirely convincing contribution concerning its effect in puerperal sepsis, make twice a statement that appears to us to be in strong conflict with the attitude of the pamphlet, in that they say that the only active way of using the substance is intravenously. They then give a series of cases in which they used it, in 46 of which the patients actually had some disturbance of temperature, etc., after childbirth. In 3 of these the result was unknown; 10 patients died and 33 recovered. There is no evidence that many of these patients had actual septicemia or pyemia, however, and the authors themselves, while favoring its use, say that one should abandon the chimerical hope that we possess a therapeutic agent that is able to stop an infection that is in full evolution; and they state that even if collargol simply aids in gaining time, through its influence on the general condition, but permits an infected woman to traverse the period of danger, stimulating the reaction of the organism in a favorable way, providing periods of freedom from fever "which depresses the patient, takes away appetite, disturbs sleep and produces headache and causes delirium, it must still logically be accorded a large share in a happy outcome." Its effects are only transitory, and the dose must be frequently repeated, if the drug is to be of any value. Now all this may be true or it may not, but it does not sound to us like the description of a specific against puerperal or other infections. It is indeed a rather vaguely cautious statement, and it would appear that since his first paper which is referred to in the pamphlet Bonnaire has become more guarded in his views as to the efficacy of the drug.

ITS USE IN CEREBROSPINAL MENINGITIS

Under "cerebrospinal meningitis" the pamphlet refers to a considerable series of authors; but it is somewhat illuminating to find that the whole number of cases reported by these men is extremely small, several mentioning only one case in which collargol was used. In most instances the diagnosis was not established by any reliable means. We would contrast two statements that we think are illuminating. One is the following, which we quote from the pamphlet marked "B," p. 20, where an article by Bjorkman is given in extenso. The quotation opens in this way:

> "In my own experience I have met with great success in meningitis from the combined treatment with silver inunctions (Credé) and antiseptic packs on the skull. In some instances the suppuration took an outlet through the nose and ears; . . ."

If this really occurred, as the result of the use of collargol or anything else, we should have profound confidence in its activity, indeed we should stand in awe of it; but we are inclined to hold in mind the statement of Dr. Jacobi, who says, in an article from which the pamphlet quotes (though this statement itself is not quoted) that in cerebrospinal fever collargolum had no action.

We would also note that, though Dr. Jacobi is repeatedly referred to as expressing a hopeful view regarding the use of collargolum, the pamphlet entirely suppresses the guarded statements with which he surrounds the hopeful statements. In speaking of Credé's silver preparations, he makes these remarks: "His followers are sometimes more enthusiastic than he is himself, though his own convictions approach sometimes a fervor of fanaticism," "The careful practitioner, who has seen many rockets to rise like stars and descend like sticks, will do well (to judge from what I have seen myself) to try the colloidal silver for what it is worth. We have all been looking for a soluble antiseptic which would kill cocci and toxins without harming the tissues. In this drug we are promised such a material. We are not bound to accept the dicta of enthusiasts, bent on writing an article which will carry their names through the ephemeral literature of a brief half year." In the other article referred to in the pamphlet, in speaking of these and other substances, Dr. Jacobi says: "I mention them without claiming prophetic gifts. They may be

5. Therap. der Gegenw., 1904, p. 305.
6. L'Obstetrique, April, 1908.

highly valuable, though whoever looks for a panacea is always mistaken."

It is, perhaps, natural that Schering and Glatz should have omitted also the following quotation from Forchheimer.[7] The article is, however, referred to by them. In speaking of the use of collargolum, he says that he began with a prejudice against it "on account of the fact that so distinguished a man as Credé had surrendered to commercialism." Dr. Forchheimer, at the end, gets only so far as to say that he does not unreservedly advise the use of this ointment but considers it worthy of a trial in so severe a condition as septicopyemia.

COLLARGOL IN ENDOCARDITIS AND INFLUENZA

In regard to endocarditis, the name most distinguished among those mentioned in connection with cardiac conditions is that of Wenckebach. The rest of the world, perhaps, will be inclined to think that he is overenthusiastic in his title, "An Effective Treatment in Septic Endocarditis," when we find that he has treated a large series of cases, and says that two, he thinks, are convincing and describes these, but that the other cases he will not mention because they are less convincing! One at least of the two that he describes certainly ran a course that has many times been seen when no supposedly antiseptic treatment was being used in this disease.

Under influenza, reference is given to an article by Afanasjeff, who is stated to believe that collargolum has a specific effect on influenza infection, and his article is given in full in one of the pamphlets. One case is the evidence offered by him to prove that we have a specific. Rommel likewise is quoted as showing the profound influence of the substance in influenza, measles and other conditions. He actually describes only one case (that one is erysipelas), and then makes vague general statements about other conditions, and in a most laudatory way recommends the drug in almost all kinds of conditions; but he does not *offer any evidence* as to the correctness of his views.

ITS USE IN GENERAL MEDICAL CONDITIONS

It is stated in some typewritten matter sent to the committee by the agents, under the heading "In Medicine" (referring to its use in medical conditions): "The most exhaustive investigations are those of Professor Netter[8] on the very large material in the Hospital Trousseau of Paris." "Exhaustive investigations" seems a somewhat liberal term when we find that in the last of these two references Professor Netter gives as his most important experience the following: Nine cases of pneumonia, 9 of typhoid fever, 14 of bronchopneumonia of all kinds, and 4 of scarlet fever, together with 37 cases of diphtheria; and the effects in typhoid fever that he describes are not made more convincing by the fact that, while he does not mention this himself, he finds it necessary to use in the second paper the same chart that he used on page 1111 in the preceding paper to demonstrate its influence on the temperature in typhoid fever. Moutard-Martin, in discussing Netter's first paper (a fact, again, that it not quoted in the pamphlet), said that the effects described by Netter are not at all convincing of the value of collargolum; they are certainly often seen without its use, even the effects supposedly shown in the twice-used typhoid chart. Professor Netter's enthusiasm incidentally goes far beyond even the indications outlined in the pamphlet. He believes that he has used the substance with most beneficial results in gastrointestinal conditions and a variety of nervous disorders, including neurasthenia, hysteria, central nervous scleroses, epilepsy, etc. Indeed, according to him, collargolum would very narrowly escape being a panacea, for there are few pathologic conditions that would not be cured by it if we follow his view.

We would also note, in regard to another important disease, that Baginsky, whose article is, as we have said, incorrectly quoted in another connection, says (a fact that is not quoted) that he treated with collargolum thirteen patients with severe scarlet fever and ten died. The non-fatal cases were not very malignant, and he considers it probable that recovery would have resulted under a simple dietetic treatment. He also notes that collargolum did not prevent complications in any of these cases, one developing otitis media, another nephritis, and the other an infection of the face. He reaches the final conclusion that "the attempt, then, to influence scarlet fever favorably with Credé's ointment failed in every way." This statement from so distinguished an authority is certainly sufficient to offset the general statements, without specific details, that are quoted from others.

COLLARGOL IN DIGESTIVE DISORDERS

In connection with the digestive disorders of children, it is stated in the pamphlet that Professor Schlossmann "advises 1 per cent. collargolum in sweetened milk when an intestinal antiseptic is needed." Since Schlossmann's name carries weight, we looked this point up. We find that what he actually says is: "A critical decision whether any improvement was due to the medicament or to the rational diet that was, of course, instituted is extremely difficult; but I think that I may recommend colloidal silver to those colleagues who have the slightest faith in the use of intestinal antiseptics, because, while it has decided antiseptic properties, it is entirely non-poisonous." In other words, if one believes at all in the use of intestinal antiseptics (and Schlossmann does not say that he does, but rather intimates that he does not), one may try colloidal silver, because it is not likely to do any harm when given by mouth. This is certainly a different expression of opinion from that indicated by the statement made in the pamphlet.

It appears, however, unnecessary to multiply these references further. In relation to the clinical side of the question, matters seem to stand much as they do in relation to the pharmacologic evidence. There are, of course, many favorable expressions of opinion from clinicians; but there are many guarded or unfavorable opinions, some of which we have quoted. It is, as we have said, a matter of history that nearly any drug that has been widely advertised has had many enthusiastic advocates for a time, whatever its actual value. As to this drug, most of the authoritative writers whose articles we have seen have, at best, a guarded, and not infrequently an unfavorable, opinion. Many who have written in recent years (and this includes a number of those who are mentioned by Schering & Glatz as having presented some of the best evidence of the value of the drug), if they express an opinion on this point, consider collargolum nearly or wholly valueless unless used intravenously; and we repeatedly find the statement from those of widest experience that the effects

7. Cleveland Med. Jour., January, 1902.
8. Bull. et mém. Soc. méd. Hôp., Paris, Dec. 18, 1902, Jan. 22, 1903.

In spite of this, the remarkable claims mentioned in the beginning are made in the most recent pamphlets as if they were beyond question, and all modes of administration are recommended except the subcutaneous. The latter is excluded only because of the likelihood of its producing local trouble.

Collargolum is also emphatically said to be harmless, whereas severe chills and marked rises of temperature after its use are mentioned by numerous authors. Such results certainly can not be said to be harmless. A number of writers mention severe infiltrations, and even abscess formation, from its intravenous use; and still more disquieting effects are described, notably by Rittershaus, who reports, in a number of cases, symptoms that indicated so alarming a condition as pulmonary embolism. Similar cases are mentioned by other authors.

CONCLUSION

We have presented sufficient evidence that there are gross exaggerations in the statements that were quoted in the beginning of this report, from the covers of the most recent pamphlets. In addition, we have shown instances of directly false and also of very misleading statements. These latter facts, even more than the exaggerations, have made us feel it incumbent on us to make a frankly adverse report. Until these practices have been entirely abandoned collargol appears to us to lie beyond the pale of scientific inquiry, for the latter, which is the search for truth, can not thrive in an atmosphere of falsehood or even unfairness. The question whether the substance itself has any intrinsic merit can not be approached at all scientifically until it is approached in the spirit of truth, frankness and fairness. The manufacturers and those who profess faith in the remedy should, more than any others, be interested in removing it from its present false position.

TYPICAL PROPRIETARY EXAGGERATION

In concluding, we wish to emphasize the fact that these remarks do not apply solely to collargol or to Schering and Glatz. All that we have said really illustrates conditions that, unfortunately, are all too common. The cry that this is a "common practice" is frequently made in extenuation. In our opinion, this is all the more reason why such practices should be exposed and condemned whenever and wherever they are found. So long as they prevail the claims advanced in all advertising matter must be considered with the greatest caution, if not with skepticism.

There are, however, two lamentable facts that are especially illustrated in the present instance. The first of these is that a large array of literature, quotations and references are misused to obscure the very views that the authors of advertising pamphlets pretend to present. It is, for instance, directly claimed by Schering and Glatz in their correspondence that the "over 300 references" mentioned in the pamphlet *substantiate the claims* made for collargol. As we have seen, this is very far from being the case, and in many instances they do directly the contrary. This, as well as the other misrepresentations and misquotations, implies a confident belief — unhappily too well justified — that most doctors are either too busy or too impressionable to verify such quotations by actually reading the original sources. Even a fairly ambitious inquirer would be effectively deterred by the seemingly hopeless task of reading 350 articles. The use of the names of widely known authors further serves to quiet any doubts of the reader and deter him from making a more accurate investigation of these claims, for most men would look on it as inconceivable that any one should have the presumption to misrepresent the actual views of such authors. The average physician has considerable confidence in the better pharmaceutical houses, and the abuse of this confidence is a serious matter—most serious of all to the pharmaceutical interests; indeed, on their part it would appear to be nothing less than suicidal.

We again disclaim the intention of singling out the firm of Schering and Glatz for criticism, though our present duty is confined to their pamphlets. On the contrary, we would urge that it is advisable and, indeed, necessary that in all instances in which remarkable claims are made the original sources on which these are based be carefully examined, whatever the substance may be and whatever firm makes the claims. We would, indeed, hold it to be an important duty of the Council to undertake such investigations in connection with any product that has been provisionally accepted, as well as with those that may be submitted in the future. The exposure of such practices, when they exist, is to the common benefit of all. We should consider that whoever has good reason to believe that such misrepresentations exist in connection with any substance can give material assistance by transmitting his information to the Council; and we would also hold that any person is remiss in the duties that he owes to the profession and to the public if he does not take such action and permits these practices to go on without doing his part to check them.

The other unfortunate fact is that while it would in some ways be very helpful if physicians could openly express their opinions in print in regard to proprietary articles in order that the good might be sifted from the useless or harmful, it is clearly very dangerous for anyone to attempt this now, for no matter how free from commercial interest in the product that he is discussing he may appear to be, anyone is always in danger of having his views, and even his very words, distorted, misconstrued, suppressed, or added to, in ways that will fit the purposes of subsequent advertisements of the drug. We thoroughly agree as to the desirability of the impartial scientific investigation of promising drugs; but we are convinced that the practices to which we have just referred are the main, if not the sole obstacles to such investigation.

We have gone into the task that you set us to a greater extent than its individual importance warranted, because as we investigated it more extensively it constantly appeared to point more clearly to an important moral that is not yet sufficiently appreciated: Advertisements of proprietary articles are usually *not even intended* to present scientific facts but, rather, the biased views or wishes of the owners.

Respectfully submitted,

J. T. BOTTOMLY,
C. W. EDMUNDS,
REID HUNT,
DAVID L. EDSALL, Chairman.

MINORITY REPORT OF THE COMMITTEE

TO THE COUNCIL ON PHARMACY AND CHEMISTRY.

Gentlemen:—The question presented to the committee I understand to be the following:

"Does the advertising matter in relation to collargolum submitted by Messrs. Schering & Glatz, contain exaggerations or misquotations of such character that the Council should require their withdrawal before approving the product?"

As to this, I find, in substantial agreement with the majority of the committee, that the advertising matter of Messrs. Schering and Glatz is misleading, both through exaggeration and through misquotation. It makes a number of positive assertions concerning the pharmacologic and therapeutic properties of collargolum for which conclusive evidence is lacking, and modifies the opinions of some of the authors cited, by addition as well as by omission.

The practice thus illustrated—a practice which, unfortunately, is widespread among the manufacturers of controlled medicinal preparations, including some which have been accepted by the Council—even when fairly attributable to carelessness, rather than to evil intention, is not to be condoned. On this point I have no difference of opinion with the majority of the committee.

Physicians, pharmacists, and especially the editors and proprietors of medical and pharmaceutical journals, are not, however, without a large measure of responsibility for the inception and development of this evil, and in assuming the attitude of judge or prosecutor, the American Medical Association must not lose sight of its former position as culprit. It is to be hoped that the increase of knowledge, no less than the stricter enforcement of ethical codes by medical and pharmaceutical societies, will bring about amendment among professional men. As to pharmaceutical manufacturers and distributors otherwise of good repute—such, for example, as the offenders in this particular instance—may we not expect that the censorship of the Council on Pharmacy and Chemistry and the pressure of public opinion will direct their attention to the matter so strongly that, not in mere obedience to these extraneous influences, but because of their own recognition of their very grave responsibilities, scientific and moral, they will hereafter exercise the necessary care in the preparation and supervision of their advertising?

On the contradictions in the advertising matter I lay less stress than do my colleagues, being mindful of the contradictions that would be evident did we assemble the reports, experimental and clinical, by recognized authorities, concerning some of the oldest and most important remedial agents.

On some of the other questions incidentally raised in the report of the majority of the committee, and with much of its criticism and comment on individual observers, I reluctantly find it necessary to express dissent.

This dissent is not based on a personal prepossession arising from clinical observation of good results from the use of colloidal silver—for I agree with the majority of the committee that in an investigation of this kind personal views should be set aside. I look, perhaps, from a different viewpoint on the experimental and clinical evidence submitted. As, however, these matters have no immediate bearing on the particular question submitted, and some aspects of the discussion would lead us far afield, I do not wish to take the time or space necessary to particularize. It is sufficient that I agree with the main conclusion, even though I can not adopt all of the reasoning of my colleagues or endorse all the views incidentally implied or set forth in their report.

PHARMACOLOGIC ACTION

In regard to the immediate matter before us, a further word is necessary. It is possible that the ordinary reader might infer from the majority findings that colloidal silver is devoid of pharmacologic action and of therapeutic value. It is true that the report does not say this, and I have no reason to believe that the majority of the committee wishes to imply it; yet to avoid misunderstanding I must enter on this point an explicit disclaimer. My own finding is that the pharmacologic action of colloidal silver is undetermined, and that while a number of ingenious conjectures have been made, with more or less plausibility, and even probability, the experimental evidence is not as yet sufficient to warrant any positive conclusion. This opinion applies as well to the experiments conducted by Dr. Anderson on diphtheria toxin as to those of Hamburger and others criticised by the majority of the committee; that is to say, Dr. Anderson's result demonstrates that under the conditions and to the extent of the experiment, collargolum is without neutralizing or destructive power on diphtheria toxin; but it would require a larger number of experiments, of many kinds, under varying conditions, and with different forms of toxin, to warrant either a general negative as to all infections, or a positive assertion as to any. On the other hand, I can not consider the fact of the absorption of the drug from the gastroenteric tract at all doubtful, though the form or manner in which absorption takes place is not yet established; neither is the usual increase of peripheral leucocytes doubtful, though the significance of this fact remains to be determined.

THERAPEUTIC VALUE

In regard to the clinical reports, I agree with the majority of the committee that very many of them are lacking in those exact details of observation which alone permit a reader to draw conclusions as to the correctness of the diagnosis and the true influence of the remedy. This does, not, however, of itself warrant us in casting suspicion on the honesty or the competency of the observers or in disputing the correctness of the statements made. It simply leaves the matter unproved. All clinicians are aware that certain conclusions impressed on them from observation of the progress of individual cases can not be so set forth, even in the most detailed and exact reports, as to convince others. And this will continue to be so while therapeutics remain an art rather than an exact science. Furthermore, as the majority of the committee truly points out, highly colored and optimistic — even absurd — reports are apt to be published concerning all drugs. This has occurred and will continue to occur in relation to the well established remedies of the Pharmacopeia, as well as concerning the newer legitimate remedies, and the nostrums and frauds, old and new. It is, however, as illogical to draw unfavorable conclusions from reports of this character as it would be to base favorable opinions on them. Cheiron, the wise centaur, is as fabulous as the contest of Athene and Poseidon; but the horse is, nevertheless, a very useful animal. All that can be done with reports which are lacking in exactitude and sufficiency of detail, whether from unknown writers or writers of authority, is to set them aside. We have, then, to consider such reports as may be sufficiently precise to permit analysis and conclusion and such generalizing expressions of opinion as may, from one reason or another, be of sufficient weight to arrest attention.

Without specifying, I find that among the reports and opinions submitted in relation to collargolum, there is a sufficient weight of trustworthy evidence to indicate for it—a limited field of established usefulness, and beyond this the possibility of a larger field needing accurate survey. In the very general way in which medical literature at present employs the term "indication," it is justifiable to say that the drug is "indicated" under certain conditions, which can be derived from a study of its genuine literature, and which it is not the province of this report to point out.

I should like to add a few lines concerning a larger question suggested by the present inquiry: It is to be regretted that as yet no satisfactory method has been devised by which the manufacturers of controlled preparations may enter into an arrangement with observers of competence and scientific standing for the prosecution, experimentally and clinically, of the exact researches necessary to establish the pharmacology and the therapeutic advantages and disadvantages of their products. The fact that a preparation is controlled removes it, as a rule, from the field of general scientific endeavor in which investigators may be moved to labor for the advancement of knowledge; while under present conditions, observers of the character indicated are, for the most part, unwilling to undertake such observations as a matter of professional employment. If, however, an analytical chemist may properly be employed and paid for work in the line of his profession, there is no reason why a pharmacologist should not accept similar engagements. If the chemist or the pharmacologist is expected to make an imperfect or untruthful report, then the bargain is, of course, dishonest; but if the chemist or pharmacologist is, as here assumed, employed simply to ascertain and report the facts, the employment is an honorable one and to be commended.

I need not here recall the arguments I have repeatedly made against the policy of "control" or monopolistic "proprietorship" in the agents of materia medica. So long, however, as it continues to exist under the laws of the United States, the situation which it creates must be recognized. Either through the medium of some special public association, or through the medium of the Council, there should be brought about a condition which will permit manufacturers to employ experts for the determination of the pharmacologic and therapeutic actions of their preparations, without loss of professional standing by the clinicians or experimenters who may accept such employment.

In the case of collargolum, it is my opinion that, while the investigations hitherto conducted have not been sufficient to establish the claims made by the proprietors of the drug, or to decide either positively or negatively as to its possession of the properties which have been conjecturally ascribed to it, a more extended investigation, taking up in a systematic manner the various points necessary for such determination, is desirable. Until such an investigation has been conducted and concluded, the matter must remain in doubt, and the advertising matter of the proprietors should discriminate, as it certainly does not now discriminate, between probability and certainty, conjecture and demonstration, plausibility and proof.

In regard to one portion of the report of the majority of the committee, I must register a specific dissent. I am not willing to put impute to improper motives the inclusion in the advertising bibliography of references to reports and observations unfavorable to the drug. That such reports and observations are not "featured" by the advertisers — an omission in which these promoters are, unfortunately, not unique — is simply an additional illustration of the evils inevitably resulting from the present system of private control of medicinal agents. The inclusion of the references in the published lists of papers is to be commended rather than condemned, but would have been more commendable had the advertisers indicated the character of the reports.

Respectfully submitted,

SOLOMON SOLIS COHEN.

OPHTHALMIA NEONATORUM AND ITS PREVENTION

REPORT OF THE COMMITTEE ON OPHTHALMIA NEONATORUM OF THE AMERICAN PUBLIC HEALTH ASSOCIATION

F. PARK LEWIS, CHAIRMAN, BUFFALO, N. Y.; C. A. HARPER, MADISON, WIS.; H. D. PEASE, ALBANY, N. Y.

In almost all parts of the world it is the universal experience that the chief local cause of blindness is still pus infection of the eyes of new-born children. Yet it was more than a quarter of a century ago that the careful and scientific experiments of Carl S. F. Credé, then widely known as a successful obstetrician of Leipzig, gave to the world a prophylactic at once simple, safe and inexpensive, which if it had since that time been universally employed would have saved the eyes of numberless thousands who because of this neglect have passed their lives in darkness. There is no doubt whatever that through the unremitting efforts which have been made by physicians and others, and more especially during the last few years, the number of infections due to this cause, and consequently the amount of blindness resulting from these infections, has been materially diminished. But it is equally a fact that large numbers of cases occur having the most disastrous results which are never seen by physicians at all and of whose existence we are aware only when statistics are sought as to the cause of blindness.

REPORTS FROM SCHOOLS FOR THE BLIND, 1907

Schools for Blind.	New Admissions. No.	Blind from Ophth. Neonatorum. No.	%
New York State School for the Blind....	13	4	30.7
Penn. Institute for the Blind, Overbrook, Pa.	27	9	33.33
Institute for the Blind, Austin, Texas....	(Not definite—about 10)		
Perkins Institute and Mass. School for the Blind	43	13	30.00
Colorado School for the Blind, Colorado Springs	7	3	42.8
Western Penn. Inst. for Blind, Pittsburg, Pa. (P'c'tage of total number in school, 31.37)	28	8	28.57
Missouri School for the Blind, St. Louis...	19	6	31.57
State Board of Education for the Blind, Hartford, Conn. ..... (Since creation of board in 1893, 34.74.)	8	1	12.50
State School for the Blind, Columbus, Ohio (Reduction of usual percentage and as low as at any time in last 12 years.)	25	6	9.83
Maryland School for the Blind..... (Percentage of total number in school in 1905, 25.50.)	13	4	30.77
Ontario Inst. for Blind, Brantford, Ont... (Percentage of total number in school, 24.7.)	23	5	21.74

How general the ophthalmia of new-born children is and what results follow it is in this country exceedingly difficult to determine. It is known only that it causes a large amount of infantile blindness. Just how much blindness is due to this cause is not exactly known. Statistics are lacking to a singular degree, but that it is still appalling is shown by the report of the Committee on Ophthalmia Neonatorum recently presented at the meeting of the American Medical Association. Letters were sent to the superintendents of the various state schools for the blind with the request that the number of cases of blindness due to ophthalmia neonatorum of those who had been admitted to the school during the fall of 1907 be reported to the committee. From those in which trustworthy reports were received the rather startling figures shown in the above table were obtained.

The average, then, of the new admissions in the fall of 1907 to the ten schools in which exact records were kept and representing eight states and the province of Ontario was 28.69 per cent., or over one-quarter of the whole number, needlessly blind.

That these are not unusual results is shown by the following report from the Pennsylvania School for the Blind for the past eight years:

Year.	No.	%	Year.	No.	%
1900—Out of 25....	11	44	1904—Out of 56....	15	25.00
1901—Out of 26....	10	35	1905—Out of 42....	21	50.00
1902—Out of 39....	9	23	1906—Out of 38....	12	31.00
1903—Out of 50....	14	50	1907—Out of 27....	9	33.33

The average percentage of these eight years is 33.36 per cent. of the whole number admitted. As this enormously high proportion of blindness due to ophthalmia neonatorum is found in states maintaining the highest standards of medical education and general sanitation, there is no doubt whatever that when exact statistics can be obtained at least as large a percentage due to this cause will be found elsewhere throughout the country.

While the ophthalmia of the new-born is exceedingly infectious and therefore avoidable, there seems to have been no concerted effort on the part of the health authorities to determine just how frequently it occurs, under what conditions it may be looked for, or how the eyes of the new-born child may be adequately protected. Attempts have been made by authorities elsewhere to determine these questions. N. Bishop Harmon, the most recent English authority on the subject, says:

"Ophthalmia neonatorum bulks large in our minds, not because it is exceedingly common among us, but because its consequences may be and frequently are extremely serious — blindness or partial blindness being too often the result of its attacks. Almost all observers agree that the disease is much more frequent among the very poor and neglected than among all of the rest of the community combined."

Among 9,630 births in an average London district where no germicide was used as a routine prophylactic there occurred within the first few days of birth seventy cases of purulent discharge, or 0.72 per cent. of the whole. In four cases eyes were lost or damaged. One child had corneal nebulæ (scars), one lost one eye, and two lost both eyes. After giving such statistics as are obtainable Mr. Bishop says: "These figures point to the conclusion that in London among every 100 children born one child suffers from purulent inflammation of the eyes in the first few days of life, and that of every 2,000 children born one child is blinded by this disease." The probabilities are that in our congested centers the incidence of ophthalmia neonatorum may not vary largely from the London figures, but in the absence of exact data any estimate of the proportion of cases occurring in relation to the population is purely speculative. That it should be known there is no question.

The exact method employed by Credé is important and interesting. After experimenting with various antiseptics the eyes of all the new-born children in the clinic, without distinction, were cleansed immediately after birth with ordinary water and then disinfected by means of silver nitrate, 1 to 50. The eyelids were gently separated by an assistant and by means of a glass rod a single drop of the solution was placed in the eye. For twenty-four hours after the application the eyes were cooled by means of a linen fold soaked in salicylic acid, 2 to 100, laid over them. Babies treated in the way described remained free from ophthalmia. A slight hyperemia was not uncommon after the use of the silver drops, and for the first twenty-four hours a rather marked secretion of the eye was sometimes observed.

The figures which Credé adduced were most striking. They were as follows:

	Year.	Births.	Ophthalmia.	Per Cent.
USUAL METHODS				
	1874	323	45	13.6
	1875	287	37	12.9
	1876	367	29	9.1
	1877	360	30	8.3
	1878	353	35	9.8
	1879	388	36	9.2
	1880*	187	14	7.6
BEGAN TO USE SILVER NITRATE AS PROPHYLACTIC				
	1880†	200	1	0.5

* Jan. 1 to May 31.
† June 1 to Dec. 8.

In the one case in the last six months disinfection had been omitted or there would have been no ophthalmia whatever.

The fact, however, that there is occasionally an irritation of the lids produced by the action of the silver has led to many experiments with other antiseptics, and especially with the newer silver salts, to discover whether equally good results could not be obtained without irritating the eyes of the child. It has been the experience of many obstetricians that weak solutions of the nitrate of silver, while not quite so efficient, were free from this somewhat alarming symptom to those not familiar with its use.

In this connection, however, the recent observation of Professor Greeff of Berlin is of value. He says: "Every case of conjunctivitis gonorrheica, at least that of the new-born, is curable." For prophylaxis he advises a 0.25 per cent. silver nitrate solution. In the treatment, at the Charité, they for a long time have used only 0.1 per cent. of silver nitrate for washing out the eyes, which must be done very frequently. This has given much better results than the stronger solutions. The eye can be saved if lavage is made every couple of hours, day and night, during the first critical days.

Greef asserts that the weaker solutions penetrate into the tissues better than the stronger ones. The irritation produced by the nitrate, too, was occasionally mistaken for an ophthalmic infection which it was supposed it had not controlled, and the silver was then continued at intervals with subsequent damage to the eyes. Young physicians and midwives were in some instances afraid to employ it, as the mothers, knowing nothing of

the danger which threatened the child's eyes from gonococcic infection, were apt to believe that the prophylactic had produced an inflammation which would not otherwise have developed, and particularly in those exceptional cases in which ophthalmia neonatorum developed notwithstanding the use of the silver.

It seemed important, therefore, that two things be done: first, that an effective antiseptic be determined on, which could be used without producing silver catarrh, as the resulting inflammation is termed, because while it is in no way dangerous to the child's eyes except in the case of feeble or premature infants or when improperly used, it is important that young obstetricians and midwives shall desire to use it and not fear it; and, second, that prospective mothers and others be advised of the danger that threatens the eyes of the child when they are not protected in order that the use of a prophylactic shall be welcomed and sought and not feared.

As might have been expected, a subject of such importance has been most carefully studied and is still receiving most painstaking agitation. The general conclusion, concurred in by both ophthalmologists and obstetricians, is that infections can with almost absolute certainty be prevented, and in the rare cases in which the infection develops, early treatment almost certainly insures its cure. Fuchs, than whom there is no higher authority, says: "If a case comes under treatment in season, that is, while the cornea is still intact, the latter can almost to a certainty be maintained in a healthy state." It must not be forgotten, however, that there is the rarely exceptional case, especially in premature and feeble children, in which infection having once occurred may go on to complete blindness notwithstanding the most skilful early treatment. In order to avoid the irritation produced by the 2 per cent. nitrate of silver solution, however, the consensus of opinion favors the 1 per cent. for general use, which is practically free from this annoyance and is almost as effective as a gonococcocide.

Stephenson, whose recent monograph on ophthalmia neonatorum embodies practically all that is known on this subject, fully agrees with this conclusion. After giving an interesting table, in which silver nitrate in different strengths was used in the eyes of 112,584 children, he says: "It is a curious fact that the percentage of ophthalmia as shown in the above table is lower with the weaker solutions of silver than with the 2 per cent. solution originally recommended by Credé." Since the introduction of the newer silver salts they have been largely used in hospital service and in private practice in place of the silver nitrate. Cragin irrigates with boric acid and then uses a 20 per cent. solution of argyrol. He presents some interesting figures confirmative of the success of this treatment, while Hirst of Philadelphia says that since using a 25 per cent. solution of argyrol he had diminished the infections to between 1 per cent. and 3 per cent. of the infants born in between 900 and 1,000 cases. Without presenting actual figures, he says that he thinks that the number of cases of ophthalmia were one-third fewer than when nitrate of silver had been used as a prophylactic. Jackson believes that this indicates an efficiency which may be trusted, but in doubtful cases would still prefer the Credé properly applied. "It is not easy," says Dr. Hiram Woods, who has given much careful study to the question, "to induce from the foregoing a dogmatic conclusion regarding the comparative reliability of the full Credé method and the newer silver salts. The irritative cases due to the silver nitrate are not very common and, while disagreeable and tedious, are not dangerous. Before it can be definitely settled, there must be a comparative study of the prophylactic efficacy in babies born of mothers with known gonorrheal infection." We are justified, meanwhile, in accepting Stephenson's opinion: "On the evidence before me, I therefore conclude that the 1 per cent. solution of nitrate is fully protective and in our present state of knowledge may be regarded as the most efficient solution to employ in the preventive treatment of ophthalmia neonatorum." All these expressions are given to show that while there may be difference of opinion as to the most efficient prophylactic, that protection to an almost absolute degree is possible, and that to secure it would be required: first, great sanitary care in the toilet of the eyes of the child; second, the use of some accredited prophylactic; and, third, early and correct treatment when infection occurs.

In this connection the experience of Dr. Snell is not without value. He reports an almost absolute freedom from ophthalmia in the Jessop Maternity Hospital simply by reason of exceeding care given to the toilet of the baby's eyes. "The patients," says Dr. Snell, "are among the poorest; some are inmates of the hospital, but the great majority are confined in their own homes. The midwives have received instructions that immediately the head is born attention must be directed to the baby's eyes. Then with little pieces of lint moistened in tepid water the eyes are carefully washed, as well as the eyelids and parts adjoining. Subsequently in washing the child, care is taken to guard against reinfection. During the last three years there have been 2,242 labors among the in-patients and out-patients. In the first 200 there were a few cases of purulent ophthalmia, but in the last 2,000, since the method has been systematically adopted, not a single case occurred. Directions were also given to the nurses that if a child's eyes looked red it was to be taken at once to the hospital for a drop of nitrate of silver solution to be dropped into the eye." When the eyes become red, however, infection has already occurred. It would be better to anticipate it by a preventive drop.

To secure these measures the cooperation of the public health authorities is imperative. They must be in touch with those who are performing obstetric work, whether accredited practitioners or midwives. Efforts on the part of public authorities to control the effects of ophthalmia neonatorum are not new. As long ago as 1882 the Austrian government issued an edict in which Credé's method was recommended to medical men, and the Austrian regulations impose a penalty on midwives for neglect to call in a doctor in a case of ophthalmia neonatorum. The Hungarian government distributed to midwives in that country a popularly-written treatise on the blennorrhea of new-born infants. In Switzerland similar regulations have been passed. In France the Academy of Medicine made recommendations as follows to the French government: First, that in all the registry offices throughout France, with the certificate of birth, short notices be distributed indicating the causes, the symptoms, and the dangers of ophthalmia neonatorum; second, that some measures be taken for the immediate notification of all cases of ophthalmia neonatorum throughout France; third, that an ophthalmic surgeon be attached to all maternity hospitals for the treatment of ophthalmia neonatorum and the

instruction of the medical pupils and midwives. In Bavaria the midwife is obliged to carry the 2 per cent. solution of nitrate of silver with her with directions for its use in case of a new-born child, while thirteen of the United States have adopted laws making it compulsory for midwives to give notice of any case of ophthalmia neonatorum occurring in their practice. The health department of Boston passed an act in 1905, of which the following is a portion:

"Should one or both eyes of an infant become inflamed, swollen and red, and show an unnatural discharge at any time within two weeks after its birth, it shall be the duty of the nurse, relative or other attendant having charge of such infant to report in writing within six hours thereafter, to the board of health of the city or town in which the parents of the infant reside, the fact that such inflammation, swelling and redness of the eyes and unnatural discharge exist. On receipt of such report, or of notice of the same symptoms given by a physician as provided by the following section, the board of health shall take such immediate action as it may deem necessary in order that blindness may be prevented. Whoever violates the provisions of this section shall be punished by a fine of not more than $100."

The first essential in any movement of this kind is to secure a public understanding of the conditions and the sympathy and assistance of the people in carrying it forward. The publication through the health bulletins of the dangers attending infantile ophthalmia, and the possibility of its prevention and cure, will do more than any other measure to develop watchfulness and care. The birth certificates would serve as an admirable medium on which to advise all whose duty it is to record births of the danger to the eyes of the child and the means of protecting them.

Dr. J. N. Hurty, state health officer of Indiana, one year ago had printed on each birth certificate the simple inquiry, "Have you used a protective for the eyes of the child?" and he writes that his returns show that 59 per cent. of the physicians in Indiana employ protectives; but how is it with the 41 per cent. and the army of untrained and uncleanly midwives? One intelligent county health officer to whom the necessity for exact knowledge concerning the nature of this disease had come, wrote to Dr. Hurty asking what prophylactic he expected to have used and why. He undoubtedly represented a vast constituency among intelligent medical men. It would be entirely practicable to print on the birth certificate something like the following:

TO PREVENT BLINDNESS IN BABIES

Ophthalmia neonatorum or babies' sore eyes may cause the blindness of the child unless prevented or cured.

Keep the discharge of the mother out of the baby's eyes.

Wipe the baby's eyes with absorbent cotton moistened in warm boiled water as soon as the head is born.

Burn the cotton used: the disease is infectious.

Do not include the eyes in the first general bath.

Drop in the eyes of the child as soon as it is born a 1 per cent. solution of nitrate of silver (or such other prophylactic as may be recommended). This may be obtained from the Department of Public Health free of charge.

For Physician:

Name of prophylactic used_____

For Midwife:

Was protective used?_____

A midwife failing to report to the health physician a case of sore eyes in a child which she has delivered will be prosecuted according to law.

Signed by Health Physician.

The ophthalmia of infancy is a borderline disease. Its prophylaxis rests with the obstetrician who is not an ophthalmologist. The disease reaches the ophthalmologist only after it has progressed so far in many instances that irreparable damage has already been done. Consequently the practical physician needs explicit advice as to an eye treatment that under other conditions would be relegated to the eye specialist.

This is peculiarly true in the case of the midwives, who are often afraid, and justly so, to apply any medicine to the eyes without exact information as to its necessity and explicit directions as to the method of use. They should have such explicit directions. They should be instructed by printed leaflets for each in her own language telling how to manage the child's head when it is born to keep infection out; they should be supplied with a chosen prophylactic determined on—whether it be the 1 per cent. silver nitrate, the 10 per cent. protargol, the 25 per cent. argyrol, or the 1/2000 bichlorid of mercury. Midwives should be compelled to report the condition of the eyes when they report the birth, and if like reports were obtained at stated periods, say monthly or quarterly, from all practicing physicians, together with the prophylactic employed, the statistics would be of undoubted value, while the constant reminder coming in the request for the records would so stimulate attention and care as practically to wipe out the disease.

Many attempts have been made by private individuals and associations to limit the blindness due to ophthalmia neonatorum. Leaflets advising mothers and midwives what measures should be taken to protect the eyes of the new-born have been liberally distributed by the Gardner Trust Fund in London. Through the efforts of Emilio Alvardo of Spain like circulars have been spread broadcast by magistrates and priests in whose hands they have been placed for gratuitous distribution, and in this country the New York Association for the Blind has engaged in similar work. One of the best of these is that issued by the Valentine Haüy Society of Paris. It will be given in translation at the end of this report.

There has, however, been no organized and official effort anywhere until the American Medical Association seriously took the subject in hand. In 1906 a committee was appointed for the purpose of determining and putting into practice such methods as would stop this pestilence. This committee is entering now on the third year of its work. It was recognized that effective control of a relatively rare disease in the experience of most physicians and yet one producing so much blindness could be secured only by the combined efforts of the medical profession and the public health authorities. The medical profession is already organized and ready for work. The chairman of the Section on Ophthalmology and the chairman of the Section on Obstetrics of the American Medical Association have each appointed a member from these sections to act with the health officer of their state. They await only the action of the Department of Public Health to make the machinery effective. The Committee on Ophthalmia Neonatorum has made suggestions which are purely advisory. Conditions differ in the various states, however, and methods that seem advisable in one may not be in another. As far as is possible the effectiveness of the work is increased by uniformity of method. Your committee has reached, then, the following conclusions:

Ophthalmia neonatorum is still a most prominent cause of much unnecessary blindness. The efforts that

have been made have already lessened its disastrous results in a large degree, but in many instances in which it seems to be infrequent it will be found to be producing blindness among the poorest and most neglected classes. In these the burden on the public treasury is greater because the victims of this neglect become almost inevitably charges upon the state.

The responsibility for the investigation, the recognition and the control of this infection rests on the department of public health. Your committee recommend, therefore, that the conclusions reached by the Committee on Ophthalmia Neonatorum of the American Medical Association be approved by the American Public Health Association, and that whenever practicable the health officer of the state or territory over which he exercises jurisdiction be urged to confer with the committee appointed by the American Medical Association and to inaugurate such measures through the state and its counties for the enlightenment of the people and the control of this disease as may in their judgment seem advisable.

The recommendations of the Committee on Ophthalmia Neonatorum of the American Medical Association are in brief as follows:

1. The enactment of laws in each state or federal territory requiring the registry of births and placing the supervisory control and licensure of midwives in the boards of health, requiring that all midwives be examined and registered in each county and that they be required immediately to report each case of ophthalmia occurring under their ministrations under penalty for neglect if found guilty, of fine, and for a subsequent offense forfeiture of license.

2. The distribution by health boards through bulletins and otherwise, of circulars of advice to midwives and mothers giving instructions as to the dangers, methods of infection, and prophylaxis of ophthalmia neonatorum.

3. The preparation and distribution by the health boards of ampules or other receptacles containing the chosen prophylactic with specific directions for its use. It is advised that the choice of the prophylactic be determined by the health officer with the advice of the committee representing the obstetricians and ophthalmologists for that state from the American Medical Association.

4. The maintenance of proper records in all maternity institutions and other hospitals in which children are born, of the number of cases of ophthalmia neonatorum with the method of treatment and the results. These reports, which should include all cases of scarred cornea as well as of blindness, should be filed at regular intervals with the department of public health and the records published.

5. Periodic report to boards of health by all physicians engaged in obstetrics of the number of cases of ophthalmia neonatorum that has occurred in their practice within a specified time, whether or not a prophylactic was used—if so, what?—together with the result.

As an evidence of the readiness on the part of the enlightened and philanthropic public to assist in any movement so practicable in its nature your committee wishes to call attenion to the work already inaugurated in these lines in the State of New York. A commission having been appointed by the legislature to investigate the condition of the blind of that state reported the existence in the state of a large amount of unnecessary blindness resulting from the neglect of new-born infant's eyes. The New York Association for the Blind, not waiting for official action, secured a sufficiently large sum of money to enable a special committee to carry on the work of prevention throughout the state. This committee, having as its chairman Mr. P. Tecumseh Sherman, a distinguished citizen of New York and former commissioner of Labor, has secured the services of Prof. George A. Hubbell, Ph.D., formerly of Transylvania University, Lexington, Ky., who will devote his entire time to propaganda for the prevention of this unnecessary waste of human eyes.

The medical societies in every state are prepared to cooperate. Resolutions to this end were recently adopted at the one hundred and twenty-seventh annual meeting of the Massachusetts Medical Society, Boston, June 9-10, 1908. It was noted that in view of the work that the American Medical Association is doing in the matter of the ophthalmia neonatorum, and the gravity of the disease, that a committee of five be appointed to consider the treatment of the disease and measures looking to its prevention. The committee was appointed as follows: Drs. Oliver F. Wadsworth, Boston; Frederick E. Cheney, Boston; Francis P. Emerson, Boston; David Harrower, Jr., Worcester, and John W. Bartol, Boston.

The following are the names of those appointed by the respective chairmen, Dr. Wilder and Dr. Dorsett, to represent the Section on Ophthalmology and the Section on Obstetrics and Diseases of Women of the American Medical Association in cooperation with the health authorities of the several states and territories:

STATE.	OPHTHALMOLOGISTS.	OBSTETRICIANS.
Alabama	Samuel L. Ledbetter	W. H. Sanders
Arizona	Aneil Martin	
Arkansas	J. W. Scales	Edwin Bentley
California	J. Bert Ellis	Frank T. Andrews
Colorado	Edward Jackson	W. A. Jayne
Connecticut	H. S. Miles	H. J. Ballard
Delaware	J. A. Ellegood	Frank Bellville
Dist. Columbia	Robert Scott Lamb	Jos. Taber Johnson
Florida	Columbus Drew	N. E. Lieli
Georgia	H. H. Martin	F. C. Hodgson
Illinois	Casey A. Wood	Chas. S. Bacon
Indiana	Albert E. Bulson, Jr.	Thos. B. Eastman
Indiana		Thos. B. Eastman
Iowa	Hiram Woods	W. A. B. Sellman
Kansas	Herbert L. Alkire	Francis Harper
Kentucky	F. Manning Brown	Louis S. McMurtry
Louisiana	H. Dickson Bruns	S. N. D. Clark
Maine	E. E. Holt	Fred W. Mann
Maryland	Hiram Woods	W. A. B. Sellman
Massachusetts	Myles Standish	D. H. Craig
Michigan	W. R. Parker	J. H. Carstens
Minnesota	Frank C. Todd	A. B. Gates
Mississippi	James B. Bullitt	J. C. Blackstrom
Missouri	P. I. Leonard	T. J. Beattie
Montana	John A. Donovan	D. Campbell
Nebraska	Harold Gifford	W. O. Henry
New Hampshire	C. B. Hammond	W. R. Garland
New Jersey	C. J. Kipp	Charles L. Ill
New York	Charles S. Bull	Herman J. Boldt
North Carolina	H. H. Briggs	J. F. Highsmith
North Dakota	Henry Beaudoux	F. J. Campbell
Ohio	Mark D. Stevenson	C. L. Bonifield
Oklahoma	E. Fowler	
Oregon	J. F. Dickson	W. E. Lewis
Pennsylvania	C. E. de Schweinitz	Jos. Price
Rhode Island	C. W. Van Benschoten	D. Frank Gray
South Carolina	E. F. Parker	E. S. LaFaver
South Dakota	E. O. Miller	
Tennessee	G. C. Savage	R. E. Fort
Texas	J. C. McReynolds	G. E. Cantrell
Utah	Fred Stauffer	F. S. Bascom
Vermont	F. J. Arnold	C. W. Bartlett
Virginia	J. A. White	R. S. Kight
Washington	David de Beck	Wm. M. Hall
West Virginia	T. W. Moore	J. Cannady
Wisconsin	Nelson M. Black	C. H. Mason

TRANSLATION FROM CIRCULAR ISSUED FOR PUBLIC DISTRIBUTION BY THE VALENTINE HAÜY ASSOCIATION, PARIS, FRANCE.

"It has been shown that in France more than one-third of the blind (18,000 in 40,000) owe their affliction to an inflammation of the eyes that followed shortly after birth and which is called the ophthalmia of the newborn. The causes of this disease are well known and may be avoided; when it is once developed it may be cured. It is due to the ignorance and the neglect of the mothers and other persons charged with the care of the newborn child.

1. *Measures to be Taken by the Mother.*—When the woman is subject to white discharges she must consult a physician. *It is these discharges that infect the baby's eyes and cause blindness.*

"2. *Care to be Given to the Child.*—Immediately after the birth of a child, before it is bathed, the lids and the tissues about them must be carefully wiped free from mucus and they should be bathed with pledgets of cotton dipped in a solution of boric acid. The pledgets should be made of perfectly clean and dry absorbent cotton and should be burned after being used. Each time that the child is bathed the eyes should be

first wiped clean in the same manner, with the boric acid solution. The hands of the person charged with the care of the child must be washed with soap and dried with a clean towel before the eyes of the child are touched. Everything that is brought near the eyes of the child must be in every instance absolutely clean. The cotton that is used on the eyes of the child must in every instance be immediately burned after it is used. The water, towels, sponges and the pledgets that have been used on the mother must under no circumstances be applied to the child. The air of the bedroom must be kept as pure as possible and the linen should never be dried in the sick-room.

"3. *What Must be Done When the Disease Appears.*—When the lids become red and swollen, are gummed along their borders, when the child sleeps or cries and mattery discharge is mixed with the tears, an oculist or a physician should be called immediately. Each hour of delay adds to the danger. While waiting, bathe the eyes of the child with pledgets of cotton dipped in a solution of boric acid every half hour. Open the lids wide and allow the solution, which should be warm, to flood the eyes and wash out any matter which may have gathered there. The hands should be washed with soap and water both before and after bathing the child's eyes. The cotton with which the eyes have been bathed should be immediately burned. The child should not be fondled and none of the appliances which have been used about his eyes or face should be used for any other purpose. All of those in the home should be informed of the danger of catching the disease by getting the matter into their own eyes. Do not listen to those who say that it will amount to nothing, or to those who say to bathe the eyes of the child with mother's milk, such advice is pernicious and will cause the loss of precious time by delaying the employment of means which might save the sight of the child."

Clinical Notes

A SIMPLE METHOD OF EXAMINING THE LARYNX IN CHILDREN

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The old or mirror method of examining the larynx in children is crude and often unsatisfactory. Under general anesthesia the tongue is pulled out of the mouth, a small mirror is introduced and an attempt is made to see the larynx. Lucky, indeed, is the examiner if he can catch fleeting glimpses of the pathologic condition. Diagnosis under such circumstances is difficult, if not impossible.

The appearance of the direct laryngoscope was of decided advantage in the examination of children. With Killian's or Jackson's instrument and with the patient's head extended over the edge of the table, a satisfactory view of the larynx can be obtained in many cases. The extended position is a disadvantage, because the muscles of the neck and throat are all rigid and on the stretch and the examiner is in rather a cramped position. Though it is possible to operate successfully in this position, there is danger of injuring important structures.

In the early part of 1908 Dr. H. P. Mosher described some new instruments and "the left lateral position" for examining and operating in the larynx. In the left lateral position the left cheek of the patient is brought near the table and the chin flexed on the neck; the instrument is then introduced and the epiglottis and base of the tongue pulled forward, using the left upper bicuspid teeth as a fulcrum. The advantages of this procedure are at once obvious to those of us who have tried both methods of examination. The muscles of the neck are relaxed; the force used to pull the base of the tongue forward is insignificant; the distance of the examiner from the larynx is much less than in extension, and operative work is thus made easier; and, last, the position of the operator is more natural and comfortable.

The simplest method of examining the larynx, in my opinion, is as follows: The little patient may or may not be anesthetized as the examiner elects. If no anesthetic is administered, two assistants are required to steady the head and the body. The child is placed on the table with a pillow under the head to flex the chin. The operator stands at the left side of the table facing the head. The mouth is opened by pressing the finger-guard between the teeth; Jackson's child (not the slide speculum) laryngoscope is introduced and passed gently down until the epiglottis is seen; then the instrument is pushed behind the epiglottis and the base of the tongue pulled forward. In this procedure little force is used, since the tissues in a child's throat yield easily to slight pressure. With Mosher's instrument there is danger of loosening or breaking the incisor teeth, which is not the case with the smaller speculum. Success depends on careful manipulation of the tube rather than on force. A clear view of the larynx is obtained and delicate operations can be performed through the tube. Those who master this method will be well repaid for the time spent in learning it. Under general anesthesia adults can be examined in the same way. The tube is rather small for large throats, and for adults an oblong instrument will probably give a better view. I claim nothing original for the above method. It is a combination of Mosher's position and Jackson's instrument; it is superior to the extension position with the same speculum or to Mosher's instrument with flexion.

SHALL WE BURY THE STUMP OF THE APPENDIX?

A NEW AND SIMPLE METHOD OF DOING SO *

HARVEY P. JACK, M.D.

CANISTEO, N. Y.

The question of the disposal of the appendix stump is still a mooted one. It has not been universally settled among surgeons whether they prefer to bury the stump of the appendix or to content themselves with simple ligature.

The convincing article of Seligmann, written a few years ago, in favor of simple ligature of the appendix has converted many to this easy method of dealing with it. In the light of recent experience it would seem to be largely a question of whether the case was an infected one; in other words, whether drainage was used or not. In those cases in which it is necessary to use drainage after amputation of the appendix, burial of the stump is not necessary, as, in the event of a fecal fistula, exit is provided; but in the clean cases it seems well established now that the raw surface should be covered in.

Dr. John A. Wyeth a few years ago published a report of a large series of cases in which simple ligature of the appendix stump had been used with excellent results; and he reported several cases of hemorrhage from an unsecured artery at the base of the appendix in which the method of inversion of the appendix was practiced. In this article he advocated simple ligature of the ap-

* Read before the semi-annual meeting of the Steuben County Medical Association, Hornell, N. Y., Oct. 13, 1908.

pendix by means of a celluloid thread. This has been the method followed by Dr. Robert T. Morris of New York, who in his experience has seen no reason to change it. I have followed this method for the last few years until recently, when I have become convinced that burial of the appendix stump should be practiced in all clean cases. While we have had no bad results from simple ligature, in one case the ligature came away, causing a temporary fistula, which, however, healed kindly. That others have not had such uniformly good results from simple ligature is gathered from an article by Murat

Fig. 1.—Burial of appendix stump. Ligature, 12 inches long, doubled, each end threaded into a fine intestinal needle tied about the base of the appendix, ¼ inch from the cecum, the knot placed on the side opposite to the raw surface left after dissecting away the mesentery of the appendix. (The illustrations are from drawings by Dr. C. C. Rowley.)

Fig. 2.—Burial of appendix stump. Each needle made to catch the wall of the cecum on one side ½ inch from the base of the appendix, opposite the knot.

Willis of Richmond, Va. Willis wrote 105 letters to prominent surgeons in the United States, asking the following questions:

1. Do you ligate or crush the stump?
2. Do you divide with knife or cautery?
3. Do you use a chemical disinfectant?
4. Do you bury the stump? (a) If so, how? (b) If not, why not?
5. Have you seen any ill effects arise from unburied stumps? If so, what?
6. Have you observed any harmful effects of any character from burying the stump?

The only questions that concern us are 4, 5 and 6. The answers to the former questions show slight difference in technic of the burying of the stump, dividing by means of the knife and disinfecting by means of carbolic acid. In answer to Question 4 it is found that 77 out of 105 surgeons always bury the stump, 66 by ligating and inverting into the wall of the cecum, 11 by invaginating the unligated stump into the cecum. These are the cases in which hemorrhage has resulted. Eleven usually bury the stump, leave unburied only those in drainage cases, and 11 never bury the stump. To Question 5, 23 of 105 answers mentioned bad results that had followed simple ligation of the stump; among these, 7 cases of intestinal obstruction from adhesion of the bowels to the stump, 2 of which were fatal; many temporary fecal fistulas; 5 cases of fatal peritonitis; many cases of postoperative adhesions; 3 cases of slipped ligature (all of which were fatal); 5 cases of secondary abscesses; 1 case of slow recovery, in which a stitch gave away during first bowel movement and a large swelling developed. This, however, was absorbed and the patient recovered.

The answers to these questions are from such men as Armstrong of Montreal, Bevan of Chicago, Blake, Bryant and Gerster of New York, Kelly of Baltimore, Matas of New Orleans, Monks and Munro of Boston, Senn of Chicago, Rixford of San Francisco, Vander Veer of Albany, and Willard of Philadelphia.

Two interesting cases, one of blown-off ligature with the result of the escape of fecal contents and death, and one of postoperative adhesion with bowel obstruction are reported by Willis himself. His first case was a perfectly clean one in which a sound appendix was removed, the stump being simply ligated. Two days after the operation the woman developed postoperative distention of the bowels. The ligature was blown off, the fecal contents escaped and the death of the patient followed. In this case a simple myomectomy was done and the appendix was removed at the same sitting. From these cases the conclusion seems established that we should always bury the appendix stump in sound or interval cases, in any cases in which drainage is not used.

There have been originated a great many methods of burying the stump of the appendix. The one most generally used is the purse-string suture. There are several objections to this method, the chief of which is the difficulty sometimes present in applying it to fat subjects or to those in whom the cecum is not very movable. When the purse-string suture method is used the appendix should always be firmly ligated first. Another objection to this method is that a considerable area of cecal wall is enfolded. When postoperative distention occurs considerable tension is placed on the purse-string suture for this reason. Another objection is that it takes an unnecessary amount of time and more needle punctures are required. The results of this method, however, have been excellent.

Fig. 3.—Burial of appendix stump. Suture tied.

Fig. 4.—Burial of appendix stump. Final mattress suture.

The method I here propose to explain is much simpler and the performance of it attains exactly the same ends as those of the purse-string and ligation method. The method consists of this: First, a good strong intestinal silk or fine celluloid yarn is selected. A ligature is cut off about twelve inches in length and each end of this ligature is threaded into a fine intestinal needle. The needles are handed to an assistant, who is directed to hold one in each hand. Sufficient length of the doubled portion of the ligature is used by the operator to tie a firm knot about the base of the appendix one-fourth inch from the cecum, the knot being placed on the side

opposite to the raw surface left after dissecting away the mesentery of the appendix. Now one needle grasped in a pair of forceps is made to catch the wall of the cecum on one side one-fourth inch from the base of the appendix, opposite the knot tied around its base and piercing the intestine to the depth of its fibrous coat. The same procedure is gone through with on the opposite side of the appendix with the other needle. This suture is now tied. When the stump of the appendix becomes buried, neatly and completely, in the wall of the cecum usually no further suture is necessary; but should there be a slight puckering of the wall of the appendix which does not completely cover the stump, one needle is made to puncture both sides of the cecal wall which projects above the stump and is then tied to the suture on the opposite side, thereby forming a single mattress suture in addition to the one first described. This will always result in a complete burial of the appendix stump. The ligature attached to the mesentery of the appendix has been left long in the beginning; one strand of this is now tied to the silk used in burying the stump, thereby bringing the mesentery as a cap over the buried stump. This, it will be seen, results in a complete covering in of all raw surfaces. I have used this method in the last few cases in which I have operated, with great satisfaction. It seems to me that there is less postoperative pain for the reason that only enough intestinal wall is used to accomplish the desired result. The simplicity of the method shortens the time of the operation, which is another reason for its use. The accompanying drawings show the method of application for this method.

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CLINICAL OBSERVATIONS ON PULMONARY HEMORRHAGE

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The sight of blood is at all times disquieting to the layman, and is particularly alarming in the case of pulmonary hemorrhage. Even the attending physician shares in the perturbation produced by a copious hemorrhage, knowing his comparative impotence in coping with the condition. It is generally conceded that there is no direct hemostatic for blood coming from the lungs because of the inaccessibility of the bleeding point. The medicinal agencies usually resorted to are such, as is believed, bring about a formation of blood-clot in a more or less indirect way. Some of these agents are directed to the heart, reducing its force, as aconite; some to the arteries, diminishing their pressure, as the nitrites; others, again, to the lungs, limiting their activity, as opium. Some are assumed to act on the blood itself, increasing its coagulability, as the calcium salts; others by reducing its bulk, as saline cathartics.

What procedures shall we employ in our attempts to control pulmonary hemorrhage, and what shall be our guide in their selection?

Theoretically, the condition of the heart, the lungs, the vessels and of the blood itself, should be our indicator. Practically, however, those who have much to do with this condition realize how uncertain is the clinical application of this guide in the great majority of cases. From a somewhat extensive experience in the handling of varying grades of pulmonary hemorrhage at the Bedford Sanatorium of the Montefiore Home (early cases) and the Sanatorium of the Jewish Consumptives' Relief Society at Edgewater, Colo. (advanced cases), I have formed the following conclusion:

Hemorrhage from the lungs is a common outward expression of an abnormal state of the respiratory organs, and, like any other symptom, requires for its rational treatment an understanding of the causative factors. I would, therefore, divide pulmonary hemorrhage into three types, according to the pathologic condition:

Type 1: Hemorrhage resulting from a hyperemic condition of the bronchial mucous membrane or lung tissue, associated with a relaxed or eroded area of mucous membrane (capillary hemorrhage).

Type 2: Hemorrhage resulting from the destruction of lung tissue, associated with an eroded small or medium-sized blood vessel or vessels (arterial or venous hemorrhage).

Type 3: Hemorrhage resulting from the rupture of a large blood vessel.

By far the vast majority of cases belongs to Type 1. Clinically, we may assume that such hemorrhages are brought about by any one or more of the following exciting causes: sudden chilling of the body; here the blood finds its way out by rhexis or diapedesis through a vulnerable area—I have seen many examples of the influence of this agent in patients who have been successfully tided over a period of bleeding in the warm wards only to have a prompt recurrence on their being removed to the exposed tents; by a pneumonia or pleurisy; by overexertion or excesses of various kinds; by exposure to wind; by hill climbing; by high altitude; by co-existing cardiac disease; by disturbances of the portal circulation; by over-distention of the stomach and by vomiting; by alcoholism; by vasomotor influence and menstrual disturbances, and by many other factors of varying degrees of frequency and importance which may tend to increase the pressure of the blood. The peculiar idiosyncrasy on the part of some individuals to bleed easily is also to be taken into account.

The question arises: How are we to discover the pathologic state in a given case, especially when we had not previously examined the patient and have no definite knowledge of his history? Here the following data may be of service: The immediate precursory signs of the bleeding and the character of the blood that is discharged. It is of value to know whether the hemorrhage was preceded by a tightness or feeling of oppression in the chest; whether the hemorrhage was intermittent and moderate or sudden and copious. It is to be assumed that in the first two instances the hemorrhage is due to congestion in the diseased area, and that in the latter it is caused by the rupture of a vessel. Regarding the information derivable from the blood itself, we are justified in believing that in the hemorrhage due to congestion the blood is red, has little or no air bubbles and little or no sputum, while in rupture the blood is mostly of a darker color, has numerous small or big air bubbles and is mostly mixed with purulent sputum. In the congestive variety, the blood is thin, in rupture it is more consistent. In congestion the blood is always coughed up, while in rupture it is either spurted up without effort or comes in a gush. In vasomotor or hysterical bleeding the blood is pink or rose-colored. The periodicity of the hemorrhage may be of value in establishing an etiologic influence; true vicarious hemorrhage is very rare, but there are

innumerable instances of blood spitting in tuberculous women, usually moderate in amount, but at times rather severe, which occurs only at the time and coincident with menstruation; these instances perhaps may be ascribed to the vasomotor excitability which is so usual an accompaniment of this function.

I believe that the management of pulmonary hemorrhage would be much more fruitful of results if our treatment were based, so far as possible, on the underlying pathologic condition.

Every patient with bleeding from the lungs should, first of all, be put to bed, in a semirecumbent position. This position favors the easy and rapid expectoration of retained blood and sputum, and thereby greatly lessens the danger of an aspiration pneumonia or a dissemination of the disease, both of them being too frequent sequelæ of this condition. The patient himself and those about him should be reassured by the calm and resolute demeanor of the medical attendant; the impression must be subtly conveyed that the case may, indeed, be serious, but nothing uncommon or necessarily menacing is transpiring. The room should neither be too warm nor glaringly sunny, as both these conditions produce mental and physical unrest; the bed covers should be warm, but not too heavy. Occasionally in case the patient is very excitable it may be a necessary preliminary to give a small hypodermic dose of morphin, say ⅛ grain, but if possible this medication should be avoided. The patient should not be permitted to converse unnecessarily, nor should he be much spoken to. Solicitous and sympathetic friends and relatives should be barred from the room, and the sick one placed in charge of a competent nurse or a level-headed member of the household, who will not disturb him by undue zeal. The food should be given in small quantities and should be of a highly nutritious quality; it should be semisolid and not more than lukewarm; necessarily it should be as easily digestible as is possible. The quantity of fluid given should be limited. The bowels and kidneys should receive prompt and proper attention. The administration of cracked ice—a very popular procedure—is of doubtful value, and its immoderate employment is to be condemned; it is apt to produce vomiting, which tends to a recurrence of the hemorrhage. It also increases the volume of blood and thus heightens the tension which again is prone to bring about a relapse.

In the class of cases supposed to be due to congestion, agents that will bring about a reduction in the blood pressure are indicated and often are of signal service; among these the nitrites, especially amyl nitrite, take the front rank.[1] When the latter drug produces headache or palpitation, potassium nitrite may be given hypodermically, usually in grain doses; the sodium salt is also greatly extolled, but the potassium salt has a more enduring effect. The bleeding once under control, resort should be had to nitroglycerin, say 1/50 grain, every three or four hours. By employing this drug according to the degree of high or low pressure (determined, if possible, by systematic use of a blood-pressure apparatus) recurrence frequently may be avoided. In case of a very troublesome cough, a small dose of morphin may be given at bedtime and will ensure a good night's rest. As the danger of pulmonary hemorrhage is not the loss of blood, which is generally made good rapidly, but the after-effects in the shape of pneumonia or spread of the disease process, I am in the habit of giving ammonium muriate combined with codein, both in small doses. The ammonium salt favors the expulsion of retained secretion, and the codein is given in small quantity so as not to interfere with this action while at the same time inhibiting too excessive coughing. As an additional eliminant, I also administer magnesium sulphate, one dram three times daily; this reduces congestion and removes excrementitious matters which when retained stimulate the vasomotor center and raise the blood pressure. Above all, care should be taken not to over-medicate, for the digestion may be upset, vomiting ensue and nutrition be lowered. While the keynote of treatment should be to avoid stimulation, caution should be observed not to go to the other extreme and still further depress the patient.

In the second type of cases, when the hemorrhage is due to rupture of a small vessel, the aim primarily should be to reduce the force of the heart and to lessen the flow of blood through the lungs. In my experience aconite is the best agent for this purpose. In addition I use the calcium salts, preferably calcium lactate, to increase the coagulability of the blood. It may be well to warn against the generally prevailing opinion that this drug may be safely given in unlimited doses; this is an error, as it is often known to disturb the stomach. Occasionally the subcutaneous or rectal injection of sterile gelatin solution is of great service in bringing about this result. Ligation of the thighs or arms or both will greatly diminish the amount of blood circulating in the lesser system; here again I find magnesium sulphate useful in aiding this effect. Vasodilators should not be given in this type of bleeding, as they stimulate the circulation. Styptics in general are of very little if of any value.

Ergot, a drug much used in routine practice for pulmonary hemorrhage, in my opinion, is not only useless, but may even produce an effect opposite to the one intended. In the case of a ruptured vessel which usually is atheromatous, its effects are *nil*. The only result is a general contraction of the muscular coats of the sound vessels, with an accompanying increase of tension of the blood and consequently a greater flow through the ruptured point.

Unfortunately in the class of cases embraced under Type 3, in which the hemorrhage is from a rupture in a large vessel, the patients respond very poorly to the efforts of the physician. When the loss of blood has not been sufficient to produce a fatal end, the most we can do is to tide the patient over the period of collapse and afterward combat the profound anemia by suitable measures, even to the extent of employing transfusion of physiologic salt solution. Ligation of the extremities may occasionally be of service.

So-called vicarious hemorrhage, or hemorrhage coincident with the catamenial period, if moderate in character, requires no special treatment. In this condition, ergot and hydrastis are recommended by some practitioners. It would be a wise step to put such patients to bed a day or two before the expected menstrual period and to shield them from disturbing or exciting influence of any kind.

Slight hemorrhage occurring in hysterical individuals should not be treated too seriously, nor should it,

1. Instead of amyl nitrite, of late I have been using chloroform by inhalation, with excellent results. The number of cases, however, in which this agent has been applied is not sufficient to form a scientific conclusion. A more detailed report on the use of chloroform in pulmonary hemorrhage will appear later.

on the other hand, be given too little heed; for it must be kept in mind that the co-existence of hysteria with tuberculosis of the lungs occurs frequently enough and that we have to deal with a very disturbing element in a disease sufficiently serious without it. When it is possible to demonstrate that blood-spitting is produced by sucking or pricking the gums, wounding the nasal or buccal mucous membrane, the approved medicinal and psychic resources may be confidently turned to account. When this evidence is lacking, however, a hysterical individual suffering from hemoptysis should be treated for the blood-spitting, with little regard for the nervous condition which may be an accidental, not a causative, complication.

Finally, it is of some importance to be alive to the occasional occurrence of malingering. There is always a certain number of people who manage adroitly to deceive one into the belief that they are spitting blood, their object being to obtain sick benefit, to escape work or to enter a comfortable institution. It is often difficult to trap these people and to expose the spurious nature of the complaint, but one who is on his guard and who has much to do with genuine cases of pulmonary hemorrhage will usually be able to classify them in their proper category.

I have not gone into the matter of conditions other than pulmonary tuberculosis which may have hemorrhage as a prominent symptom. In most instances, a hemorrhage from the lungs means phthisis of that organ, but we can not forget the by no means rare cases of blood-spitting in bronchiectasis and in mitral stenosis.

A SHAWL PIN IN THE MALE URETHRA

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Patient.—E. P., white, aged 13, a schoolboy, was admitted to Kansas City Post-Graduate Hospital, Nov. 23, 1908.

Previous History.—The patient stated that on the night of Nov. 19, 1908, in attempting to remove an accumulation of dirt or foreign matter from the glans penis, he had passed a shawlpin head first into the urethra, and it had slipped away from his grasp and become fastened in the urethra. He denied sexual perversion.

Present Condition.—The boy is well nourished and well-developed. Intellectually, he seems below normal and has a peculiar defect in speech, something between a lisp and a stammer. He complains of nothing referable to bladder or otherwise, and passes urine without difficulty. He was brought to the hospital by his father because the boy had told him of losing the pin in his urethra, not because of any particular discomfort caused by the foreign body.

Examination.—The prepuce could be easily retracted from glans; the penis was well developed. At the penoscrotal angle, deep in the tissues, could be felt a round mobile mass about the size of a pea. Nothing like the shaft of a pin could be outlined or palpated. There was no particular pain on palpation of the foreign body, which was considered to be in all probability the head of the pin.

Roentgen Examination: An *x*-ray photograph was taken by Dr. E. H. Skinner, the hospital roentgenologist. It showed the pin lodged in the membranous urethra, with an apparent shortening of the pin to about one-half its size, its actual length being six centimeters. The picture seemed to confirm the opinion that the small mass felt at the floor of the urethra was the pin's head.

Operation.—Nov. 24, 1908, after the usual surgical preparation, an incision was made at the penoscrotal angle along the urethra, over the small round mass. It had been anticipated that when the incision reached the urethra, the head of the pin could be grasped and withdrawn; however, on approaching the urethra it was discovered that it was the point of the pin which had been nearest the surface, and that the rounded feeling imparted to the touch had been caused by the stretching of the tissues over, and, as it were, "padding" the point. The head of the pin rested in the bladder, into which viscus the entire pin had been denied ingress only because of the length and lack of flexibility of its shaft. The point of the pin was grasped by forceps and drawn through the, as yet unopened, floor of the urethra into the wound. Its entire removal was prevented by the pin head coming in contact with the urethral floor. Instead of enlarging the opening in the urethra to a sufficient size to permit the delivery of the head, the following procedure was adopted: the head of the pin was turned toward the external meatus and passed along the urethra until it could be grasped by a forceps introduced through the meatus, by which route the *corpus delicti* was easily extracted. This left only a very small puncture in the floor of the urethra, merely large enough to admit the diameter of the shaft. The wound was closed by three deeply placed silkworm-gut sutures.

Subsequent History.—The patient suffered from nausea for four hours. He was catheterized seven hours after the operation, four ounces of urine being obtained; afterward he voided urine naturally. He passed a good night and was put on general diet the next day. There was never any leakage of urine through the operative wound, which healed perfectly. The stitches were removed on the seventh day following operation, on which day the boy left the hospital. He has remained in good health since.

CYSTS WITHIN THE SPINAL CANAL

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ST. LOUIS

Krauss[1] reviews eleven cases of cyst of the spinal canal. Of these only one, that of Spiller[2] appears to be identical with the one herewith reported. Spiller[3] says: "A collection of clear fluid in a cyst of the spinal pia arachnoid is a condition little known in America, as only one case occurring in this country is on record (Spiller, Musser and Martin), and only a few are found in the German literature. So far the French and English journals contain no examples."

History.—Miss M., a patient of Dr. Willis Hall of this city, aged about 50, was well and always very active up to August, 1905. In jumping from a rapidly moving buggy she fell heavily on the left buttock. The left ankle was broken. The hip continued to hurt after the ankle healed, and since the accident she has suffered from a "shifting neuralgia." She felt after the accident that "her spine was all jolted up." The gait was at times disturbed by the pain in the left hip. In 1906 (date can not be fixed) the patient suffered severely from pain across the chest at the upper level of the breasts. This increased through 1907. In March, 1907, she had a hard fall in a railway coach, which made her sore all over but produced no local pain. In April, 1908, the patient was in St. Luke's Hospital three weeks on account of pain across the front of the chest. In El Paso, Texas, she had "grip" (?) in August, 1908; she had no cough, no cold in her head, but ached all over, most intolerably in her hips and back. About the same time severe cramping occurred in her legs. When out riding she would frequently have to stand up in the carriage on account of the cramping. By the last of August she became extremely awkward in her gait.

Dr. Fry, who saw the patient September 5, noticed that incoordination of gait and station was the most conspicuous symptom of the case at that time. He noted also loss of pain and temperature sense with fair preservation of tactile sense in her legs.

About October 1 she became entirely paraplegic. The muscular contractures and startings were more severe. If the legs

1. In Brain, 1, 1907, Part CXX, 533.
2. Univ. Penn. Bull., March and April, 1903.
3. Am. Jour. Med. Sc., January, 1909, p. 95.

were passively placed in extension, violent involuntary flexion occurred. The bladder and rectum ceased to act. When the patient was brought to the hospital the bladder was greatly distended. The catheter brought away 74 ounces of urine.

Examination.—Nov. 9, 1908, she lay on her side with knees drawn up, unable to move any muscle groups in the lower extremities, except the adductors of the thighs. The legs and feet were entirely paralyzed. Muscular cramps were frequent and severe and awoke her from sleep. Contractions became more severe if the legs were passively extended. The bladder and rectum were functionless. Ankle-jerks and knee-jerks were much increased; ankle clonus sides and reversed plantar reflex were present on both sides. No abdominal reflexes could be elicited. Pain sense was very much obtunded in the feet and legs; less so in the thighs and trunk except on a level with the upper half of the mid-piece of the sternum, where the severest pain had always been. A space an inch wide vertically and about three inches wide horizontally was without pain response, but tactile and temperature impressions were recognized. Analgesia shaded off into hypalgesia. Elsewhere below this point tactile and temperature sense were obtunded to about the same extent as pain sense. The upper limit of the hypalgesia was at a line drawn horizontally through the junction of the first with the second piece of the sternum. There was no zone of hyperasthesia above this line. Arms and armpits, neck and head were normal. There were no cranial nerve symptoms.

Operation.—By Dr. Harvey Mudd, Nov. 30, 1908, 9 a. m. The spines and part of the laminæ of the seventh cervical, the first and second dorsal vertebræ, were removed. The dura bulged irregularly at the upper and lower ends of the part exposed, seeming to indicate a constriction between. The dura was a darker white at the bulging points. The dura was slit centrally from below upward. A sharp spurt of clear fluid, which could not be distinguished from the cerebrospinal fluid, occurred. It seemed that the lower end of a sack had been opened, for the upper end ballooned up with cerebrospinal fluid, as it surged upward in response to the cardiac movements. When the dura was grasped by forceps and gently lifted, small bands of tissue were seen stretching between the dura and the pia. Very slight force with a dural probe sufficed to break these up, after which the ballooning process ceased. There was proliferation and engorgement of the vessels of the pia. The dura was stitched. The wound was closed with a small catgut drain. Surgical recovery was prompt and uninterrupted.

Postoperative History.—December 2 there was movement of left ankle, and fairly good excursion. Reaction to pain and tactile impressions in both legs were much improved. The patient could not be thoroughly examined on account of her objection to it.

December 4: There was improved sensation in all forms. The patient moved the left toes, ankles, leg and thigh; she moved the toes of the right foot feebly. The adductors of both thighs moved. There was a sense of desire to urinate.

December 7: There was no increase of motor power but the patient recognized and localized all forms of sensory stimuli in both legs. There was some pain in the area at the sternum, but better pain sense.

December 11: There was gain in power of all muscle groups of the left leg. The patient could raise her heel off the bed when the toes were resting on the bed. There was no movement of the toes of the right foot but good excursion at ankle; the adductors and abductors of the thigh were improved. Pain and tactile sense responses were prompt and accurate over the entire surface of both legs. There was marked desire to pass water an hour before catheter time.

December 18: The patient passed a small quantity of urine voluntarily. The left leg and foot, including the toes, moved freely. The ankle clonus persisted. The patient had some cramping but very much less severe. The right leg was much improved in all movements, including the toes. The abdominal muscles were active.

December 19: The patient voided eight ounces of urine voluntarily and thereafter emptied the bladder successfully and bowel movements became normal.

December 30: The patient moved all muscle groups in both legs. The ankle clonus, on both sides and all deep reflexes were present. The patient kept her legs flexed but could extend them voluntarily.

January 1, 1909: The patient swung the legs out of bed and sat up on the edge of the bed unaided. The right leg was as good as the left in motor power. The ankle clonus and plus knee-jerks persisted. The feet felt "sleepy," but pain, tactile and temperature tests brought prompt and correct responses.

January 14: The patient could support her weight by placing her hand on a chair to steady herself. There was some contracturing at the knees and full extension brought discomfort, but she could extend the legs voluntarily. The "startings" had ceased. Her general health was perfect.

PROBABLE INSOLATION FOLLOWING ABDOMINAL SECTION IN AN INSANE WOMAN

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Patient.—Woman, aged 50, brunette, of medium height, weight 150 pounds, the mother of one child. This child died at the age of nine and the patient continually mourned its loss.

History.—I was this patient's medical adviser for fifteen years. While she was never very strong, she had fairly good health, until about four years ago, at which time she learned that she had a fibroid tumor of the uterus and was advised to have it removed. She refused operation, and since then had suffered with a variety of obscure symptoms, seemingly neurasthenic in character. She has always lived a sedentary life of luxury at hotels, both at home and abroad. She rode around the country a great deal in a motor car. I first treated her about fifteen years ago for constipation, and at intervals during eleven years I treated her for attacks of suppression of urine and attacks of vertigo. In April, 1898, I removed a benign polyp of the cervix. She first consulted me six years later about having attacks of vertigo, and I sent her to Dr. H. Bert Ellis, who fitted her with lenses for a slight error of refraction and a little astigmatism. The ophthalmoscope revealed normal and healthy fundi. With the glasses the attacks of vertigo were less pronounced, but she stated that when walking outdoors the sidewalk appeared to rise up in front of her. At this time she was under the care of Dr. R. Wernigk, who reported no evidence of kidney disease. He called in consultation Dr. Elbert Wing, who thought the case one of either hysteria or neurasthenia. There was then no evidence of gross brain disease.

Present Illness.—On June 15, 1908, about ten days after Dr. Wing saw her, I was called. Her husband stated that she had gone insane, and was destroying all her letters, etc. She had turned all her jewelry over to him, remarking that she would not need it again. I advised that she be put to bed in the care of a trained nurse and closely watched day and night. In the morning the night nurse informed me that the patient had had a restless night and had slept very little. She took nourishment under protest; in fact she protested not by word but by action against everything that she was asked to do. I diagnosed the case as one of melancholia. On the following day I made a thorough examination and found the uterus about four times its normal size with a fibroid projecting from the right side of the fundus. Her husband stated that a Buffalo physician had diagnosed fibroid three years ago and advised its removal, and that Dr. Wernigk had recently done the same thing. The growth of the tumor had been slow and had not interfered with menstruation.

Course of the Disease.—The patient slept very little for the first week. After the first week one gram of chloral was given about 8:30 p. m. and in five minutes she would fall into a sound sleep and generally would have a good night, sleeping from six to eight hours. Without the chloral she would not sleep. Only on a few occasions were we obliged to administer bromids to keep her quiet during the day. On one occasion, during her husband's absence, she became unmanageable, both nurses being unable to control her. After this she was very restless and

disturbed for a couple of days. When first taken ill she appeared to be well nourished but was anemic. This condition was caused principally by self-dosing for many months previous. Every night before retiring she would take a strong laxative pill of some sort or other and follow this in the morning with from 4 to 8 grams of Carlsbad salts, insisting that she was bilious.

Blood: Examination of the blood showed, white cells 7,000, red 1,000,000; hemoglobin, 60 per cent. She was given a tonic and hematopoietic, and encouraged to take a good supply of nourishing diet. At the end of two months the blood examination showed, white cells 1,625, red 1,000,000, and hemoglobin, 85 per cent.

Urine: She secreted a normal quantity of urine and frequent examination always showed it normal.

Mental Condition: Her mental condition continued to grow worse; she would not speak to any one, including her husband, and frequently refused to take nourishment.

Treatment.—From the first I advised her removal from the hotel to the country but could not prevail on her husband to do so. I then advised removal of the tumor. Dr. H. G. Brainerd and Dr. M. B. Campbell were called in consultation and concurred in the diagnosis of melancholia. The question foremost was whether the removal of the tumor would have a tendency to aid recovery. Dr. Brainerd argued against operation; Dr. Campbell advised it. The question of operation was then left entirely with her husband, who, about two weeks later, requested that the operation be performed. She was removed to the Pacific Hospital, and apparently did not realize the change of surroundings.

Operation.—She made very little resistance to being prepared for operation. On September 2, at 9 a. m., I performed a total hysterectomy. Pulse was 90, temperature 99 F. One hour before operation a hypodermatic injection consisting of morphin 0.016 gm. and strychnin 0.0016 gm. was given by advice of the anesthetist, Dr. F. D. Bullard. The patient took the anesthetic, ether, very quietly and safely throughout the operation. On opening the abdomen, the uterus and fibroid tumor presented. There was also a large cystic tumor on the left side (the size of a child's head), which proved to be a tubo-ovarian cyst, intraligamentous, covered by intestines and adherent by fibrous cords and bands over its entire surface, requiring many ligatures and much time in enucleating it. On the right side I encountered the same difficulty but the cyst was only about the size of an orange. The left cyst contained 600 c.c. of brown colored fluid and a concretion the size of an English walnut, the right cyst contained 100 c.c. clear fluid. I removed the entire mass without the use of clamps by double ligating the arteries and adhesions and dividing between ligatures thus obviated the bruising of tissue and preventing any loss of blood. The entire operation was done without any mishap except that the walls of the small cyst, which were very friable, were ruptured in extracting it. As it contained a clear fluid no damage was done. The abdominal cavity was washed out with sterile normal saline solution, and about 500 c.c. at 100 F. were gently poured in before sewing up the peritoneum. Time under the anesthetic was 2 hours 15 minutes. The patient showed some signs of exhaustion but stood the operation well and left the table apparently in good condition. Pulse was 110, of good volume and regular. The last half hour of the operation the patient took very little anesthetic. The entire amount of ether consumed was only 600 c.c.

Postoperative History.—The day was one of the hottest of the season. The temperature of the operating room was from 90 to 95 F. As the patient was perspiring freely she was placed in a comfortable bed previously warmed with hot water bottles. The day nurse who had cared for the patient for the past three months was placed in charge. Between 3 and 4 p. m. I was astonished to learn that the hot water bottles had been renewed because the patient had ceased to perspire. On touching the patient I was shocked to find the skin so extremely warm. The nurse had not noticed any change for the worse. The hot water bottles were hastily removed and the temperature taken by rectum. The thermometer registered 108 F.; the pulse was 160, full and strong; respiration was 26 and the skin was dry and hot. In the axilla the temperature was 107.2 F. The pupils were dilated, the conjunctiva not reacting to touch. An ice cap was immediately placed on the head and the patient was sponged off with alcohol. She was catheterized and 120 c.c. urine drawn. One hour later the temperature was 106.8 in the rectum; respiration was 30, not full; pulse was 140, full and strong; the pupils were dilated. At 7 p. m. temperature was 106, skin moist, pulse 120 and full, regular and strong; respiration was 30; pupils were dilated, conjunctival reflex did not respond to touch. Up to this time the patient had apparently not reacted from the anesthesia. At 10 p. m. temperature was 105, skin dry, pulse 120, full, regular and strong; respiration 35; pupils less dilated, no reflexes. The catheter was again used and 150 c.c. urine drawn. The symptoms gradually improved during the night. At 7 a. m. patient was again catheterized and 180 c.c. urine drawn. She then commenced to show signs of restlessness, moved her arms and legs, and occasionally rolled her head from side to side. The conjunctiva showed return of reflexes; the skin was dry; temperature was 103.4 by rectum; pulse was 120, full, regular and strong; respiration was 36 and shallow. At 10 a. m. the condition was about the same except that the restlessness was increased. At 12:30 p. m. the pulse was 125, irregular but full and strong; temperature was 103; skin was dry; respiration was 40, very shallow and irregular. The patient became less restless, and had involuntary bowel movements.

Termination of Case.—Suddenly there was a change in the patient's appearance, the lips became livid, and the cutaneous circulation sluggish. There were some slight internal convulsive movements of the chest, the eyes oscillated, the pulse became more irregular but remained full almost to the last, when at 1:40 p. m. life became extinct, twenty-seven hours after operation.

I am at a loss how to determine the immediate cause of death. On the death certificate I inscribed as immediate cause of death basilar meningitis. From the symptoms presented I could not lay the cause of death directly to the operation.

The question foremost in my mind, was the prolonged anesthesia in a patient having some brain lesion the cause of a meningitis? Or was this a case of insolation induced by the prolonged use of the hot-water bottles on this fervid day? Also the patient was more or less fatigued from the prolonged operation, and the system was, therefore, less able to resist the excessive heat, due, in the first place, to the high atmospheric temperature of the weather, and, in the second, to aggravation of this by the uncalled-for prolonged use of the applied artificial heat (temperature unknown).

Bonniman[1] says: "By far the greater number of cases of thermic fever that occur yearly in India are in persons who have not been exposed to the sun. . . . Patients in hospitals who have been confined to bed are frequently the subjects of attack."[2]

A SIMPLE CANULA FOR THE DIRECT TRANSFUSION OF BLOOD

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In the operation of direct transfusion of blood by the method of Crile, certain difficulties have sometimes been encountered, and efforts have been made by a number of operators to simplify the procedure. Some experience is required before the Crile instrument can be handled with ease; the caliber of the cuffed vessel is decreased by the canula; sometimes there is difficulty in telescoping the artery over the vein. The steps of

1. Edinburgh Med. Jour., Vol. XIV, p. 1029, 1864.
2. I also refer the reader to article on Thermic Fever in Pepper's System of Medicine, 1st edition.

the operation with Crile's canula are numerous, and the application of guide sutures and the tying of ligatures complicates the operation, as the following enumeration of the steps of the operation will show. The technic of direct transfusion by Crile's canula comprises the following:

1. The choice of the canula of the proper size.
2. The exposure of the vein of the recipient, its isolation and division.
3. The stripping back of the adventitia and the application of fine guide sutures.
4. The threading of the vein through the lumen of the canula.
5. The cuffing of the vein and the ligature of the cuff behind the basal ridge of the canula.
6. The exposure and isolation of the radial artery.
7. The application of a temporary hemostatic clamp.
8. The division of the artery after the application of a peripheral ligature.
9. The application of the guide sutures to the artery, and the telescoping of the artery over the cuffed vein.
10. The application of a ligature to keep the artery in place.
11. The removal of the hemostatic clamp from the artery so that the blood may flow from the artery of the donor to the vein of the recipient.

The following is the description of a canula which I have devised, the use of which will make a number of the manipulations above enumerated unnecessary and will simplify the entire operation.

Simple canula for the direct transfusion of blood.

The canula is built on the principle of a monkey-wrench, and can be enlarged or narrowed to any size desired by means of a screw at its end (see illustration). The smallest lumen obtainable is about equal to that of the smallest Crile canula, and the largest greater than the lumen of any radial artery. The instrument is cone-shaped at its tip, a short distance from which is a ridge with four small pin-points which are directed backward. The lumen of the canula at its base is larger than at the tip. The construction of the canula can be easily understood from the following description of the method of using it.

The radial artery of the donor is exposed and isolated in the usual manner. The canula, screwed wide open, is then slipped under and around the vessel. It is then screwed shut until the two halves of the instrument slightly compress the vessel. The artery is then tied off about one centimeter from the tip of the canula. Before the vessel is divided three small eye tenacula are passed through the wall of the artery at three points of its circumference, a few millimeters from the ligature. Small mosquito forceps may also be used. These are given to an assistant, who makes traction on them while the operator cuts the vessel near the ligature. The moment the artery is cut the stump is pulled back over the canula by means of the tenacula or forceps, and is held in place without ligation by the small pin-points. There is no bleeding from the artery, even though no hemostatic clamp has been applied, because the canula itself acts as a hemostatic clamp. The vein of the recipient is then exposed (but not freed), two ligatures are passed around it; one is tied peripherally in the usual manner. A small transverse slit is made in the vein, the canula with the cuffed artery inserted into the vein, a ligature tied around the vein and canula, the canula screwed open, and the blood allowed to flow. The rapidity of the flow can be varied as desired by the size to which the instrument is screwed or unscrewed, and the lumen of the artery is never diminished.

It will be noticed that the artery is cuffed instead of the vein; this method I believe to be more correct. The vein is the larger vessel and can therefore be more easily telescoped over the artery. The vein is only exposed, not freed, and the artery is intubated into it.

With this canula I have been able to make the anastomosis in less than four minutes after the artery had been isolated, and have found the entire procedure a simple one. The advantages of the instrument are the following:

1. One canula will fit any vessel.
2. The canula is applied around the vessel, instead of the vessel being drawn through the canula.
3. No ligature of the cuffed vessel is required.
4. The canula itself acts as a hemostatic clamp.
5. The cuffing of the artery is easily accomplished without stripping back the adventitia, and therefore the traumatism to the artery wall reduced to a minimum.
6. The vein need only be exposed, not dissected out and cut.
7. As the canula is unscrewed, the blood will flow, the flow can be regulated at will, and the lumen of the artery is not diminished.

Madison Avenue and Sixty-third Street.

APPENDICOSTOMY IN PERNICIOUS ANEMIA*

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Pernicious anemia is a primary anemia, characterized by a progressive diminution in the number and changes in the form of the red blood corpuscles associated with a decrease in the amount of hemoglobin, which is not so marked as the reduction in red blood cells. The disease usually terminates fatally, whatever the method of treatment, but often there are periods of marked improvement, followed by relapse. It is not within the province of this paper to discuss the etiology, pathology or symptoms of this disease; I shall limit myself instead to the treatment in those cases that are supposedly due to anaerobic bacteria in the intestinal tract. Herter, who is the pioneer in this line of work, asserts that anaerobic bacteria in the intestinal tract play a prominent part in the etiology of pernicious anemia. He has shown that oxygen is found only in the small intestine, and that for this reason these bacteria must live and propagate in the large intestine. He has demonstrated that these bacteria form a toxin, and that by injecting this toxin into the lower animals a blood picture similar to that of pernicious anemia is produced. With this theory as a working basis, Hollis and Ditman have used colonic lavage in two cases, with good results. In both cases arsenic was thoroughly tried, without beneficial effect. The colonic lavage caused the indican and the skatol to disappear rapidly from the urine, and the hemoglobin in two months' time rose from 25 to 80 per cent. and the red blood cells from 1,000,000 to 4,000,000. Several months after discharge both patients were well, and with no decrease in blood count.

* Read before the Southern Surgical and Gynecological Association, St. Louis, Dec. 15-17, 1908.

Houghton[1] reports a case in which the treatment was more radical. The patient was a man, 69 years old, with symptoms and physical signs of pernicious anemia, hemoglobin 45 per cent. Unfortunately, the reds were not taken. A differential showed a relative lymphocytosis with many normoblasts. The urine was albuminous and contained casts, and the skatol and indican reaction was marked. Arsenic and colonic lavage failed to produce any improvement. Houghton performed a cecostomy, and through the fistula the colon was irrigated night and morning with a saline solution. Houghton informs me, in a personal letter, that the patient, who had improved rapidly, died from the kidney complication twenty months after operation. A count made a short time before death showed the blood almost normal in character, with the exception of a slight anemia.

The case that I desire to report occurred in the service of my colleague, Dr. J. A. Witherspoon, and was under the charge of his associate, Dr. W. C. Dixon.

Patient.—A negro man, 45 years old, was admitted to the hospital the first week in April, 1908. He had marked muscular weakness, shortness of breath, and instability of the pulse, also edema of the ankles. He came to the hospital for relief of diarrhea, associated with gastrointestinal symptoms.

Examination and Treatment.—The mucous membranes were quite pale; there were brownish discolorations on the skin of hands and face; exhaustion was extreme, without marked emaciation. An examination of blood on April 10 showed the red blood cells 1,800,000, the white blood cells 3,000, hemoglobin 30 per cent. The patient was given ascending doses of arsenic, reaching as high as thirty drops three times a day of Fowler's solution. Colonic irrigations of salt solutions were also used. On May 5, 1908, the red blood cells were 2,000,000, white blood cells 5,000, and hemoglobin 50 per cent. On May 23, 1908, red blood cells were 1,710,000, white blood cells 3,500, and hemoglobin 50 per cent. The nucleated red cells were in great numbers, both normoblasts and megaloblasts, associated with a marked poikilocytosis. At this time 95 per cent. of the bacteria in the stools were anaerobic, and no intestinal parasites were found. A twenty-four-hour specimen of the urine showed a trace of albumin, no sugar and a few hyaline and granular casts. The ethereal sulphates were present in large quantities in the urine, as well as indican and skatol. A test meal showed complete absence of hydrochloric acid, with the presence of lactic.

Operation.—I suggested to Drs. Witherspoon and Dixon that an appendicostomy be performed, and by this means colonic irrigation be done. As the patient had grown progressively worse under the routine treatment for this disease, and as his condition was extreme, they readily agreed, and with the patient's consent the operation was carried out on May 23. I made a long incision through the right rectus muscle, in order that a good view of the abdomen might be obtained. The tissues showed but little tendency to bleed; the rectus muscle was quite red, while the peritoneum and intra-abdominal contents were unusually pale. The liver was slightly enlarged, and the gall bladder moderately distended without stones. The stomach was markedly contracted, no growth being present. The mesoappendix was ligated and divided; two chromic catgut sutures were placed, one above and one below the appendix, grasping the cecum, peritoneum and fascia. The appendix was then stitched to the lower angle of the skin surface of the wound by one suture, and the incision closed in ordinary way. The free end of the appendix, beyond the skin surface, was wrapped in rubber protective tissue and the wound dressed. At the end of thirty-six hours the tip of the appendix was gangrenous and cut off.

Postoperative History.—A small rubber catheter was passed into the intestine through the appendix and tied in position. Through this catheter a quart of salt solution has been passed into intestine twice daily from time of operation to the date of writing. The fluid is usually passed out of the anus in from one to five minutes from time of introduction into the intestine. The patient was delirious for one week following operation, and developed a multiple neuritis, which I believe was due either to the disease or to the large doses of arsenic prior to the operation procedure. Ten days after the operation improvement was noted in the blood, the red blood cells being 2,600,000, hemoglobin 51 per cent. The patient's convalescence has been slow but encouraging. The wrist-drop and foot-drop are now very slight, the appetite and digestion are good, and the weakness and exhaustion have disappeared. Up to October 10 the stomach contents showed complete absence of hydrochloric acid; on that date, however, an examination showed a trace of hydrochloric acid and the disappearance of the lactic acid. On December 10, 1908, examination showed red blood cells 3,860,000, white blood cells 7,200, and hemoglobin 66 per cent. It is interesting to note that before operation 95 per cent. of the bacteria in the stools were anaerobic, the *Bacillus capsulatus aerogenes* preponderating. Ten days afterward 40 per cent. were anaerobic. Thirty days afterward 20 per cent. were anaerobic, and on October 10 the anaerobic bacteria were present only in normal quantities, and have remained so up to the present time. The large amount of ethereal sulphates, indican and skatol found in the urine before the operation—an amount characteristic of pernicious anemia—are now only in normal quantities. A twenty-four-hour specimen showed no albumin or sugar, a few hyaline casts and urea 1.5 per cent.

I must express my thanks to my colleague, Dr. William Litterer, for the careful examinations of the blood, urine, stools and stomach contents, for without these this paper would be of no scientific value; and to Drs. Witherspoon and Dixon I am especially grateful for the very accurate history of the case. It is too early at the present time—seven months after operation—to claim a cure; yet the great improvement in the blood, the return of strength, the disappearance of the anaerobic bacteria from the stools, combined with the reappearance of hydrochloric acid in the stomach, make a clinical picture which is very suggestive of recovery. It seems to me that we are safe at the present time in drawing the following conclusions in regard to pernicious anemia:

1. In all cases stools should be examined in order to determine the presence of a *Bacillus capsulatus aerogenes* infection.

2. If these bacteria are present in great quantities, then high irrigation, combined with arsenic internally, should be used; and if the patient fails to improve, then, it seems to me, the appendix offers the best route for thorough irrigation.

1. Houghton, Harris A.: Apparent Recovery from Progressive Pernicious Anemia Following Cecostomy and Colonic Lavage, THE JOURNAL A. M. A., June 29, 1907, xlviii, 2186.

APPENDICITIS AND ACCIDENT INSURANCE *

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A case of peculiar interest, because of the accident question, is that of Dr. M. G. Dadirrian, New York. He has made claim for insurance money on the basis of an attack of appendicitis caused by the accidental swallowing of a lump of solder.

History.—Early in June, 1908, the patient, aged 69, felt a hard lump in his mouth while eating his dinner. The lump was involuntarily swallowed while he was trying to catch it between his teeth. A few days later he developed acute appendicitis. The integrity of the appendix had never been questioned previously. When I saw the patient in consultation with Dr. Charles Hendee Smith and Dr. Thomas H. Cherry,

* A case reported at the meeting of the New York Society of Medical Jurisprudence, Feb. 8, 1909.

June 17, a rapidly spreading general peritonitis was well under way.

Operation.—An operation for removal of the appendix was performed as quickly as we could get the room ready. Purulent fluid, past the protective staphylococcus stage, was free in the peritoneal cavity, and there was a walled abscess area about the cecum. The adherent appendix was perforated at a point of round gangrene, and in the perforation lay a lump of solder, about the size of a grain of popcorn. The solder was of conventional drop form, with one end as sharp as the point of a pin, and the other end blunt. The sharp point was emerging at the perforation, and was clearly enough the direct cause of the attack of appendicitis. The appendix was removed quickly, through a McBurney incision, and a wick drain left in the short unsutured wound. No effort was made to remove pus from the peritoneal cavity except by offering a line of least resistance by means of the small capillary drain.

Result.—The patient made the customary recovery after this sort of operation, so far as infection was concerned, but there was tardy repair of the wound surfaces, which was probably to be accounted for by the age of the patient, and perhaps by the influence of a mild diabetes mellitus, of several years' duration. The diabetes had been under control, and the proportion of sugar was reported to be from 1 to 2 per cent.

In this case we have a question bearing on the matter of accident insurance, which may call for new adjudication of the word "accident." Perforation of the appendix by the lump of solder accidentally swallowed was not materially different from a perforation that might have occurred from the accidental discharge of a pistol carrying the solder as a missile. The ultimate result, from cause to effect, would seem to be one of relative time only.

616 Madison Avenue.

TREATMENT OF EPISTAXIS

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By far the greatest number of cases of nose-bleed have their origin in the anterior cartilaginous portion of the septum, in the so-called locus Kiesselbachii. Small hemorrhages are easily controlled by the repeated application of a small pledget of cotton moistened with a mild astringent solution to the bleeding point. In the last few years adrenalin solution—1 to 1,000—has been used for this purpose, also a 2 to 4 per cent. solution of cocain hydrochlorate. The cocain solution is efficient in many cases, but has a number of disadvantages. Heydenreich[1] recommends the application of sodium perborate to arrest hemorrhage after operations in the nasal cavity.

In some cases of severe bleeding it is difficult to locate the bleeding point exactly. In such cases, by means of an ordinary powder insufflator, I inject the sodium perborate powder directly into the nasal cavity. Immediately after the insufflation a grayish-white foam issues from the nose, due to the oxygen produced. This oxygen in its nascent state covers and exerts a certain pressure against the bleeding point and the hemorrhage is arrested.

In a case of serious hemorrhage from the nasal cavity in a woman of 48, with sclerotic arteries and in the menopause, I resorted to the tampon, which I applied in the following way: A strip of aseptic gauze one-half inch wide was moistened with a 2 per cent. solution of boric acid and this strip I covered with powdered perborate of soda and introduced into the nasal cavity. I packed it lightly, into the anterior nares in an upward direction. The hemorrhage ceased immediately; the tampon was removed the next day. Before removing such a tampon it is advisable to moisten it with a mild antiseptic solution by means of an atomizer.

224 West Twenty-fourth Street.

1. Deutsche med. Wchnschr., 1908, No. 3, p. 114.

Therapeutics

OPTIMISM AND PESSIMISM

Nothing hinders the advance of scientific therapy more than these two attitudes on the part of physicians toward the treatment of disease. On the one hand stand numbers of practitioners who hasten into print lauding the satisfactory results of first one treatment and then another, generally medicinal, of first one and then another disease. These same optimistic physicians will many times be found the following year lauding an entirely different treatment from that they advised and found so successful the preceding year.

On the other hand there is a large class of clinicians whose names are significant of the best in medical research and whose teaching is listened to with respect from one end of this country to another, but who are so pessimistic as to the treatment, or the management, of disease as to prevent the scientific investigations necessary to develop common sense and rational therapy. These physicians write and teach largely of differential diagnosis, pathologic findings, and of the symptoms of a disease in their totality. They gladly accept, describe and advise any antitoxic or specific treatment that is found valuable in a disease. They also carefully describe and advise physical therapies, climatic changes, and the surgeons describe all the operative interferences to cure disease. But it is exceedingly rare for one of this class of physicians, whose duty it is to teach, to describe or advise the best method of overcoming the many troublesome symptoms that occur in the course of most diseases. Although in their personal practice they overcome difficulties, tide patients over serious conditions, and actually prolong and save life by medicinal treatment as well as by scientific management, they are unwilling, for some unknown reason, to attribute such successful outcome in these cases to the advantages of any drug or set of drugs. They even seem at times to think that it is an acknowledgment of failure, or something derogatory to their prestige, to admit that the proper use of a drug has really caused their general treatment to be a success.

Such lack of scientific therapeutic teaching causes a large number of general practitioners to listen to enthusiastic proprietary detail men and subsequently to use a preparation for a given condition the active ingredient of which the teacher of medicine may have long used, but in a simpler and less expensive manner. The physician using such a preparation and obtaining good results frequently rushes into print and lauds the preparation or combination of drugs as a cure for that condition or disease, when really it is the principle active ingredient of it that did the work, and which perhaps had been used for that purpose for years.

The thing needed, then, in scientific therapeutics is more careful instruction in details by the teachers and bedside clinicians, and, as pointed out by Gottheil, a willingness on the part of the general practitioner to describe his failures as well as his successes. Also the general practitioner who writes of his therapeutic successes should constantly bear in mind, first, the trend

of troublesome conditions to recovery; second, that it is not always the last drug, preparation or treatment that benefited the patient, but that the previous treatment really caused the cure; third, that many a new drug or new preparation offered with the enthusiasm of the physician cures a patient by psychologic effect, much as often does a change of physicians or a change of environment.

In this connection a paragraph from an article by W. S. Gottheil, in THE JOURNAL, Nov. 21, 1908, may well be quoted:

"The rôle of image-breaker is always an ungrateful one, and especially so in therapeusis. In the face of the essential problem and crux of medical endeavor, positive claims have an authority and a charm that give them every advantage over merely negative criticism. Yet the iconoclast is as necessary as the builder, and sometimes even more so. A franker and freer discussion, less reticence as to failures, and a more judicial attitude toward successes would save much misconception and much useless labor and suffering. An extramedical observer, studying the files of our professional journals, would conclude that there are few if any incurable affections, and that the chief difficulty of the modern therapeutist is the selection of one among the many curative measures that are recommended. How far the facts are in accord with this each one of us can judge from personal experience."

Therapeutics means everything that is of importance to the patient. All the scientific investigations in physiology, etiology and pathology are of no value to him unless the knowledge gained therefrom can be therapeutically applied. While anything that borders on the symptomatic treatment of disease should be discouraged, it is only the consultant, the book on practice, and the lecturer, who may ignore the treatment of troublesome symptoms. The physician's visit to a patient is not of the greatest value, and the consultant has not finished his services until the troublesome symptoms of a patient have been thoroughly discussed and methods devised aiming toward their amelioration. Many a loyal patient has been driven from one physician to another, and finally to quackery, by professional scientific neglect of symptoms which to him appear of most importance.

It is a mistake for a physician to declare that he has cured a disease or condition. What he does do is to "manage" the disease and the patient who has the disease and it is the details of this management, hygiene, nursing, diet, physical treatments and, lastly, medicinal necessities that comprises the totality of the therapy of disease.

It is a mistake, and one that is very prevalent, to believe that therapeutics means medicinal treatment only. Therapeutics covers the whole field of management of disease from the cathartic dose of calomel through a necessary laparotomy, to perhaps a convalescence in southern California. The whole range of what shall be done for a patient with a given condition or disease to the final cure, or death, of that patient is therapy.

A disease can not be correctly treated unless the following facts are considered:

1. Can the etiologic factor in a given disease be discovered, and can it be removed? This is the primary treatment.

2. What physiologic processes in this patient are disturbed by this disease? The aim of all treatment should be the attempt to correct such disturbed physiology, and at the same time not to disturb the normal physiologic processes.

3. The pathologic conditions which are the result of the disease should be removed, if possible; ameliorated, if removal is not possible; and never irritated or made worse by any medicinal or physical treatment. Special care should be taken that whatever treatment is deemed advisable for the patient, it should not aggravate or make worse the pathologic condition present.

4. The symptoms and signs of the disease which in their totality determine the diagnosis, and the extent to which the pathology of the disease has progressed, are in their totality of minor and secondary importance in the treatment. On the other hand, individual troublesome symptoms must be removed or ameliorated, else normal physiologic processes which are necessary to recovery can not be performed, and toxemias that otherwise need not have occurred may perhaps be the determining cause of the non-recovery of the patient.

Of all symptoms, that of pain is the most important and the one from which the patient must have relief. It does not seem to make a great deal of difference whether such pain is pathologically excusable or present only on account of psychologic mistake, the nervous irritability and finally depression caused by it must be taken into consideration and must be treated or, better, managed. At least, pain must be prevented at any cost. This does not mean that the physician should hasten to the use of unneeded narcotics, nor that he should ever use a narcotic without regret and without the extra supervision that should always go with such treatment, but it is the skillful, thoughtful, discriminating physician who can determine the best method of eradicating the symptom of pain in each individual patient.

To carry out the medicinal treatment needed properly to manage a given disease the physician should have his drugs classified as to their utility and select the best drug for each particular object, and the best drug should be decided on after a careful consideration of its complete physiologic action. This means not only its ability to combat the condition under consideration, but also through what organs this drug is excreted, where it causes disturbed physiology, if any, and whether or not it will add to the pathology of the disease present.

Such deliberate decision will select the best drug needed for a given condition in a given patient. This is knowledge, and is not groping after the unknown and mysterious which is always the mental attitude of the physician who prescribes pharmaceutical preparations and nostrums either of unknown ingredients, or, at least, of unknown methods of preparation, which may have added solvents or correctives to a solution that should not be administered to the patient. It also naturally follows that elegance in prescription writing and in the method of administering disagreeable drugs should be taken into careful consideration by the practitioner. Frequent consultations with his pharmacist will enable a physician either to write a prescription that embodies the best method of administering a given drug, or such consultation may develop the fact that this drug is prepared and offered in a simple, satisfactory preparation that does not contain biproducts or ingredients that are undesirable. Simple, elegant preparations offered by pharmaceutical firms are excusable, but it is inexcusable to order the mixtures prepared by these firms. A physician should be able to write a prescription to suit the needs of each individual patient.

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[For other information see second page following reading matter]

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THE FUNCTION OF THE ADRENAL CORTEX

The importance of the discovery of the blood-pressure-raising substance of the adrenal, and the rapid development of the use of this substance in practical medicine, has caused the fact that the production of adrenalin is not the sole function of the adrenals to become much obscured. According to the experimental and analytical evidence, adrenalin is produced only by the medullary portion of the gland, thus leaving the function of the much more abundant cortical tissue to be explained; and, furthermore, we have clinical evidence that adrenalin does not represent the entire product of the adrenal gland, in the fact that we can not ordinarily relieve the manifestations of Addison's disease by administration of either adrenalin or adrenal extract. We have every reason to imagine that the cortical portion of the adrenals may be functionally entirely different from the medulla. In the first place, the histologic structure is quite different, the medulla having large sinus-like blood channels surrounded by cells which are rich in material staining with chromic acid or its salts, while the cells of the cortex are characterized by their columnar arrangement and their richness in glycogen and lipoids. Embryologically these two portions of the adrenals are even more sharply distinguished, for the medulla is derived from a portion of the sympathetic nervous system and thus traces its origin back to the neural ectoderm, whereas the cortex is derived from the mesodermic epithelium which covers the fore part of the Wolffian body in front of the germinal epithelium. Indeed, in some animals, notably in the elasmobranch fishes, the cortex and the medulla are represented by entirely distinct organs, and the organs which contain the sympathetic nervous elements, representing the medulla of man, are found to yield extracts with the physiologic properties of adrenalin, while the other organ corresponding to the cortical tissue is inert in this respect. In birds, which have a high blood pressure, the medullary elements constitute an exceptionally large proportion of the gland.

In view of the embryologic origin of the cortical elements from a part of the primitive tissue of the urogenital tract, it might be suspected that this particular part of the adrenal is related to the generative organs, and there is much evidence that such is the case. In rabbits the cortex of the adrenal hypertrophies during pregnancy; in frogs seasonal variations in structure occur corresponding to the period of mating; in birds and reptiles the adrenals are in close anatomic relation with the generative glands rather than with the kidneys. Also the histologic structure of the corpus luteum of pregnancy recalls at once the appearance of the adrenal cortex. Pathologic anatomy has given much evidence of this relationship between the adrenal cortex and the generative organs, a subject which has been much considered of late, especially in England, because of the stimulus given by the extensive paper of Bulloch and Sequeira.[1] These authors reported a typical case in which a girl began to menstruate at the age of 10 years, after which there was a rapid development of the generative organs and female characteristics, with marked obesity, and excessive growth of hair on the face as well as on the pubis and axillæ. These changes accompanied the appearance of an abdominal tumor which at autopsy was found to be a tumor of the left adrenal with the structure characteristic of adrenal cortex and of hypernephromas. In the literature they found eleven similar cases, involving chiefly young girls, and all characterized by the association of tumor of adrenal cortex with premature sexual development, excessive growth of hair, and not infrequently pseudohermaphroditism. In addition to these are cases in which precocious development, chiefly in females, has been found accompanied by simple hypertrophy of the adrenals.

If we correlate these observations with the well-known fact that in fetal and infantile life the adrenals are very much larger proportionately than in adults (at the end of the third month of fetal life they are larger than the kidneys, at birth one-third as large, and in the adult but about one-forty-fourth as large), the evidence seems conclusive that the adrenal cortex has to do with development, especially the development of the reproductive organs, and the sexual characteristics. If the size of the adrenal is increased in infancy by either hypertrophy or tumor formation of cortical tissue, this development is stimulated to an excessive degree, and even in adults adrenal tumors may cause excessive growth of hair and change in sexual characteristics, as in the case described recently by Thumim.[2] Tumors of the adrenals not associated with such developmental abnormalities are not rare, but these are usually sarcomas and therefore not new growths of the secretory epithelium. Presumably the influence of the adrenals on growth is not limited to the reproductive organs, for as early as 1806 Friedrich Meckel noticed absence of the sexual organs and adrenals in an acardiac monster, and later observers have noted that defects of development of the cerebrum are commonly associated with aplasia or hypoplasia of the adrenals.

1. Tr. Path. Soc. London, 1905, lvi, 189.
2. Berl. klin. Wchnschr., Jan. 18, 1909, p. 103.

Guthrie[3] has collected reports of cases of precocious physical development, both sexual and somatic, which he finds may assume either an adispose or a muscular type, the former affecting chiefly females and the muscular type occurring only in males. Premature hirsuties occurs in practically all cases of either type, but other evidences of premature sexual maturity are not necessarily present, and in some cases instead of excessive growth of adrenal cortex, tumors have been found in the pineal gland, the testicles, or the ovaries, indicating the interrelation of these four organs.

It is interesting to note the part which these cases of premature development of muscular type have played in mythology and art, in the guise of "infant Samsons" or "infant Hercules." Pliny speaks of a boy who, when he died at the age of 3, had a great voice and was four and one-half feet tall. Craterus also mentions an individual who in the course of seven years was infant, youth, adult, parent and old man, and then died. The gigantic boy of Willingham, Cambridge, born in 1741, weighed fifty-eight pounds at the age of 3. His organs of generation were fully developed, and there was hair on the face and pubes. He died of tuberculosis at the age of 6. Anthony White in 1806 recorded a similar case in a boy aged 3 who was the exact counterpart of the Farnese Hercules, and Guthrie considers it probable that legends of Hercules and Samson were based on individuals with this particular form of giant growth.

THE COLLARGOL INVESTIGATION

The reports of the committee appointed to consider the claims made for collargol by its American agents, which appear elsewhere in this issue,[1] form, we believe, one of the most remarkable contributions ever made to medical literature.

Never before, probably, in the history of medicine has a body of scientific medical men acted in a judicial capacity in a matter of this kind — a matter that would, at first view, seem to be one of apparent insignificance, but which is found on examination to have a most profound significance for the progress of medicine. The amount of labor involved in the investigation, while enormous, has been in the highest degree altruistic, for let the results be what they might, the task was not only a thankless one, but one liable to call forth abuse on those completing it. The fact that men of such standing as those who composed this committee were willing to devote the time and work necessary to the accomplishment of the purpose intended, argues well for the new era in medicine. Five years ago a task of this kind would have been looked on as utopian and visionary, or the problem as one unworthy the serious consideration of scientific men. To-day it is different, for times have changed. The profession has become awakened to the detrimental influences connected with the commercial domination of therapeutics, and is ready and anxious for the truth.

In reading these reports—and every physician should read them—this thought should be kept in mind: The committee was concerned with the advertising matter and not with the value of the drug *per se*. As to the latter, the real value of any drug can only be determined by a sufficient amount of clinical experience, and the best any small group of men can do is critically to examine and report on the results of others. And the evidence in regard to collargol is still so contradictory that a definite judgment as to its final place in therapeutics would be premature. As to the former—that is, the consideration of the advertising matter—its importance will be realized when it is remembered that the vast majority of physicians obtain their first information concerning proprietary remedies from advertising matter, and first impressions are often lasting. In the matter of advertising, deplorable conditions are known to exist. It is somewhat of an excuse for this firm—but it is all the more deplorable from the standpoint of the profession and of the public—that both its claims and its methods of making them are not exceptional nor unusual, but are typical of those that generally obtain.

The reports deal, first and last, with the examination of the evidence on which are based the claims made by the manufacturers, and the question resolves itself into: Does the advertising matter relating to the remedy contain exaggerations, perversions of data or misquotations? The answer to this question by the committee in both reports is unequivocally in the affirmative. Whatever minor differences there may be between the minority and the majority reports, the important and essential fact is the unanimity of the committee in declaring that the advertising matter in question misrepresents the views of the authors quoted. It is misleading, both through exaggeration and through misquotation; it makes a number of assertions for which evidence is lacking; and both by addition and omission it modifies or perverts the opinion of some of the authors cited.

Discriminating physicians are no longer misled by the so-called original article type of testimonials, i. e., those written for financial or other considerations, and which are fulsomely laudatory of the preparation. The literature advertising collargol, however, is not of this nature, but is drawn from scientific sources. The fact, therefore, that the authors, whose work has been misleadingly quoted, are men of standing whose opinions carry weight with the medical profession, makes such perversions of opinions the more reprehensible.

There are few abuses more serious than the misuse for commercial purposes of the work of men high in the medical and pharmacologic worlds. Scientific work of the highest character, if it deals even remotely with a drug to which some firm holds the property right, is

3. Brit. Med. Jour., Sept. 21, 1907, p. 747.

1. Collargol: Reports of the Committee Appointed to Consider the Claims Made Regarding Its Effects. Page 862. See also comments in Pharmacology Department, this issue.

likely to be made to do duty as an advertisement. By the skillful separation of sentences or paragraphs from their context, and by the use of introductory phrases which lead the reader to assign to the quotations a meaning altogether different from that intended by the author, it is possible to construct good advertising "copy" from any scientific report. Busy physicians, even though alive to past abuses, and intelligent above the average, have been misled by these perversions of the reports of scientific men and the practice has reached alarming proportions.

It has been the complaint of manufacturers that their products are not the subject of scientific investigation —and with reason. But when scientific men know that the results of their work will be used as a basis for advertisements, that their statements will be distorted and meanings that were never intended will be read into their sentences, is it any wonder that, careful to keep their professional honor unsmirched, they prefer to leave proprietary remedies alone?

We repeat, the work of this committee, irrespective of its findings, argues well for the awakening of the medical profession to one of the most insidious and vicious abuses connected with proprietorship in medicines. It is sincerely to be hoped that the result of this investigation may lead reputable pharmaceutical manufacturers generally to exercise a stricter censorship of their advertising matter.

THE DIAGNOSTIC AND THERAPEUTIC VALUE OF LUMBAR PUNCTURE

It is a good plan to take stock occasionally of procedures which have gained a permanent foothold in the medical armamentarium, partly because the new members constantly added to our ranks may not know the history of them, and partly because familiarity with a procedure tends to make us forget its dangers and drawbacks, which, however, are apt to be overestimated rather than underrated in the beginning. It is now eighteen years since lumbar puncture was introduced by Quincke, and in that time it has gradually progressed from the status of a procedure of occasional value to that of one in daily use.

The originator of lumbar puncture probably did not foresee the different lines along which its application would develop. He may have believed that ordinary chemical and microscopic examination of the fluid withdrawn would mark the limits of its usefulness. Cytodiagnosis in the modern sense, which has added considerably to the diagnostic value of lumbar puncture, was not developed until much later, and spinal anesthesia was practically unknown in 1891. E. Bramwell[1] has recently reviewed the subject in an interesting manner. He does not emphasize the possible dangers of the procedure very strongly, though he urges great caution in performing it in cases of intracranial tumor with increased pressure. The fact that its use in anesthesia has occasionally been followed by myelitis, at times resulting fatally, is not mentioned.

There is no doubt that the value of lumbar puncture under certain conditions is very great, providing that its limitations are recognized, and providing that, like any other single diagnostic procedure, it is interpreted in the light of all the clinical findings. The pressure under which the fluid exudes may give valuable indications of increased intracranial pressure, and the naked eye appearance may be of great value when spinal hemorrhage or meningeal hemorrhage is suspected. The chemical and cryoscopic examinations seem to be of distinctly less value than the bacteriologic and cytologic tests.

In the administration of meningitis serum lumbar puncture has become a *sine qua non*, and not merely a diagnostic and general therapeutic measure in this disease. The value of the cell count is also demonstrated, the lymphocytosis of tuberculous meningitis and of spinal syphilis or tabes, and the pure leucocytosis of non-tuberculous meningitis being often of decided value. The value of the spinal fluid for serologic tests, like the Wassermann reaction for syphilis, is beginning to be appreciated as a result of the work of Noguchi and others. The procedure has certainly come to stay. From the diagnostic standpoint it may be of great value in distinguishing meningitis from hysteria and focal cerebral lesions, in detecting spinal or even cerebral meningeal hemorrhage, in differentiating neurasthenia from the early stages of general paresis, and in allowing the early recognition and treatment of spinal syphilis.

1. Clinical Studies, vol. vii, pt. 2, 1909.

THE BITING OF MAN BY RAT FLEAS IN RELATION TO PLAGUE

Recent investigations in India and elsewhere have demonstrated beyond doubt that fleas play an important rôle in the transmission of plague from rats to man, and they have especially implicated the common rat flea of India (*Pulex pallidus*), although the *Ceratophyllus fasciatus* has also been shown to be capable of conveying the infection. The importance of the flea as an agent in the dissemination of plague has rendered necessary a more thorough study of these insects.

Since 1907 the U. S. Public Health and Marine-Hospital Service[1] has collected and identified fleas from different ports, particularly in connection with antiplague measures. These studies have demonstrated that the *Pulex pallidus* is commonly found in our country, and that it has a wide distribution. Fox has shown that the *Ceratophyllus fasciatus* and *Pulex pallidus* are the fleas most commonly found on rats in San Francisco, their relative proportions at some seasons being approximately three of the former to one of the latter.[2]

1. Annual Report U. S. P. H. and M.-H. S., 1909.
2. Public Health Reports, Sept. 25, 1908.

Considerable diversity of opinion has prevailed as to whether rat fleas will bite man—an important question in view of the rôle assigned to these insects in the spread of plague. The British plague commission observed that *Pulex pallidus* would feed on a man's hand, and in a series of five experiments they were able to keep this species of flea alive for nearly four weeks on a diet of human blood.[3] Similar experiments have recently been reported by McCoy and Mitzhain, working in the laboratory of the Public Health and Marine-Hospital Service in San Francisco.[4] These observers collected four different species of fleas from rats and ground squirrels, and confined each flea in a separate test-tube. The fleas were then applied to the hand or forearm of a healthy man from time to time. In this manner it was found that the two common species of fleas found on rats in San Francisco, *Ceratophyllus fasciatus* and *Pulex pallidus*, will bite man, the *Ceratophyllus fasciatus* having been kept alive for thirty-five days on a diet of human blood.

Further experiments showed that *Ctenopsyllus musculi* would feed on man as would also the squirrel fleas, *Hoplopsyllus anomalus* and *Ceratophyllus acutus*. In one experiment the common ground-squirrel fleas of California fed readily on man and were kept alive in this manner for twenty-eight days. These studies are important, as they prove that rat and squirrel fleas will bite man.

It has already been shown that fleas transmit plague from rats to man, but the exact method of transmission is still unknown. Such studies should be continued, as they throw additional light on the epidemiology of plague.

3. Jour. of Hyg., 1907, vii, No. 3, p. 473.
4. Public Health Reports, Feb. 19, 1909.

PUBLICATIONS ON EXPERIMENTAL MEDICINE OF NEW YORK STATE SOCIETY

Year after year the efforts are renewed by those one-ideaed sentimentalists, the antivivisectionists, to secure the passage of some measure which shall place all forms of experimentation on animals under special restrictions, on the assumption that the already existing legislation against cruelty to animals fails to meet actual or possible wrong doings by the experimenters. As in the case of all people who have fanatically surrendered themselves to an obsessing idea, it is hardly to be hoped that any argument, however cogent, based on whatever array of facts, however overwhelming, will tend to shake their adhesion to the idea which has become to them a fetish. There are, however, many followers at a distance accepting unquestioned the threadbare stock arguments of the professional fanatics, who might perchance realize the truth if it were once placed before them. Again there are others to whom these specious arguments and pleas are being submitted for the first time, and to whom, being in ignorance of the facts, they might appear to bear the stamp of reason. And yet again, and before all, there are those who, having once known the actual facts, in part at least, have forgotten the data on which their knowledge is based. To all these a recapitulation by competent authorities, each in his own line, of specific facts in which actual and practical benefits, not only to the human race, but to the domesticated animal world, have resulted directly and unequivocally from animal experimentation, should prove of the utmost value. It is an admirable and practical work, therefore, that is now being performed by the Committee on Experimental Medicine of the Medical Society[1] of the State of New York, in issuing a series of articles bearing on the legitimacy and necessity of animal experimentation and demonstrating the perniciousness, as well as the utter lack of justification, for any form of special legislation in restriction of such experimentation. Among the papers that have recently come under our notice are "Animal Experimentation and Diabetes," by Dr. Graham Lusk; "Ethics of Animal Experimentation," by Dr. John Dewey; "Animal Experimentation as Viewed by the Superintendent of a Hospital," by Rev. G. F. Clover; "The Service of Animal Experimentation to the Knowledge and Treatment of Nervous Diseases," by Dr. Charles Dana; "The Relation of Animal Experimentation to the Live Stock Industry," by Dr. V. A. Moore; "Animal Experimentation and Nutrition," by Prof. L. B. Mendel; and "Why Are Special Laws to Restrict Animal Experimentation Unwise?" by Dr. John G. Curtis. These articles are full of the right kind of information, tersely enunciated in the right manner.

1. 17 West Forty-third St., New York City.

THE REPORT OF THE HOMES COMMISSION AND THE ATTEMPT TO SUPPRESS IT

One of the most interesting and valuable of government documents issued for many years is the "Report of the President's Homes Commission" which has recently appeared. It is a 400-page book, filled from cover to cover with data and suggestions of much more than ordinary interest. Those parts dealing with sanitation and with the drug habit will appeal to physicians as particularly opportune and to the point, and the public generally will have its eyes opened to the viciousness of self-drugging and the frauds in patent medicines and quackery. Its educative value is so great, and the general scope of its inquiry so excellent, that when the daily papers recently asserted that an effort was being made in the United States Senate to prohibit the transmission of the document by the United States mails, it was difficult to accept the statement seriously. There seems no doubt, however, that pressure is being brought to bear in an endeavor to limit the circulation of this valuable and instructive book. According to the papers, objection is made to that part of the commission's report which deals with social betterment. This chapter, it is claimed, is "too broad in dealing with the social evil." As a large portion of the part referred to is made up of quotations from various high-class magazines, among them the *Ladies' Home Journal*

and *Collier's Weekly*, the accusation would seem to be in the nature of a joke. The question at once arises, why this objection to frankness and ingenuousness on a subject of vital importance? There seem to be two possible answers: First, the document is the result of a commission appointed specially by President Roosevelt, and the Senate—or many members of it—has an antipathy toward anything Rooseveltian. Second, that part of the report which deals with fakes and fakers, chiefly of the medical type, calls attention to the incalculable value of the "fraud order" system of the postoffice department in putting out of business the various get-rich-quick concerns that infest the country. With the part played by the postoffice secret service agents—regarding land schemes—still fresh in our minds, it is not difficult to imagine that some members of the upper house are likely to estimate the value of the work of the postoffice department from a personal rather than from a civic standpoint. One result of this unfortunate attack will be the whetting of the appetites of that portion of the public to whom anything of a supposedly salacious nature appeals. In fact, as the newspapers stated at the time, "the document rooms of the House and Senate were completely stripped of the home commission reports during the day." It is to be hoped that the report of the President's Homes Commission may not be denied transmission in the mails, but, on the contrary, that it may have the wide circulation which, from its very evident usefulness, it deserves.

WORK OF THE AMERICAN CIVIC ASSOCIATION

The American Civic Association is carrying on an educational, suggestive and cooperative campaign in several directions for the esthetic and sanitary welfare of the community. In the former regard it is taking much needed measures to prevent the destruction of those wonderful natural beauties, the falls of Niagara, at present threatened by a greedy commercialism that sees no limits to the supremacy of what it terms utility over the esthetic sense, forgetful of the fact that the esthetic sense itself is an important utilitarian factor in the moral and mental welfare of the human race. Another abomination against which it has set itself is the fungating excrescence of unsightly billboards disfiguring the country. In cities, at any rate, these hoardings—as has been recently pointed out in relation to board fences by Dr. W. H. Atkinson,[1]—have a sanitary aspect. The third object, and the one most directly in line with public hygiene, is the advocacy of public comfort stations in our large cities. In this respect the United States is far behind all European cities. If the American Civic Association can aid in the more general adoption of these important necessities for the public health it will certainly accomplish a praiseworthy work.

1. Washington Med. Ann., January, 1909.

The Fossil Man of Chappelle-aux-Saints.—The *Semaine Médicale* of Paris, Dec. 23, 1908, contains a description of the recently discovered fossil skeleton in a cave near Corrèze. It represents a type below any previously discovered, resembling more the anthropoid apes than the human type.

Medical News

CONNECTICUT

Bequest to College.—By the will of the late Dr. Gurdon W. Russell, Hartford, of the class of 1834, Trinity College, his alma mater receives a bequest of $5,000 for the natural history department and its laboratory.

Change in Medical Course.—With the beginning of the new year the course in the Yale Medical School is to be changed. For admission to the school there is required the equivalent of two years of work of college grade, including preparatory work in general chemistry, biology and physics. The general plan of the new curriculum is that before beginning the clinical studies of the last two years, the student must have completed the required course in anatomy, physiology, organic and analytical chemistry, histology, embryology, bacteriology, pathology and laboratory courses in pharmacology.

GEORGIA

State Sanatorium for Tuberculosis.—The first meeting of the board of trustees of the State Tuberculosis Sanatorium was held February 11. Dr. Thomas R. Whitley, Douglasville, was elected president, and Dr. Marcus F. Carson, Griffin, secretary. The following committees were named: Plans, Drs. P. S. Clark, Darien, and Charles H. Richardson, Montezuma; rules, Dr. Marcus F. Carson; and bids and regulations, Drs. E. Everett Daniels, Moultrie; Charles F. McLain, Calhoun; Jeff Davis, Toccoa, and William P. Crawford, Lincolnton.

Society Meetings.—At the annual meeting of the First District Medical Society, held in Statesboro January 27, Dr. John K. Train, Savannah, was elected president; Dr. Alfonso J. Mooney, Statesboro, vice-president, and Dr. John F. S. Sigman, Savannah, secretary. It was decided to hold the next session in Savannah in June.——At the annual meeting of Worth County Medical Society, held in Sylvester January 20, Dr. W. C. Tipton was elected president; Dr. W. K. Stewart, vice-president; Dr. Guy G. Lunsford, Sylvester, secretary, and Dr. Valter P. Stevens, Poulan, delegate to the Medical Association of Georgia.——Sumter County Medical Society, at its annual meeting, elected Dr. Robert E. Cato, president; Dr. J. Richmond Statham, vice-president; Dr. Douglas B. Mayes, secretary, and Dr. F. B. Gregory, delegate to the Medical Association of Georgia.

ILLINOIS

Prohibits Distribution of Medicine Samples.—The Hoopeston city council recently passed an ordinance prohibiting the throwing or distribution of "patent-medicine" samples on doorsteps, sidewalks, streets, and alleys of the city. Samples may be left at any residence if handed to an adult.

Staff Organizes.—The physicians' staff of St. Anthony's Hospital, Rockford, met for organization February 26, and elected the following officers: President, Dr. W. Grant Hatch; vice-president, Dr. Emil Lofgren, and secretary-treasurer, Dr. George P. Gill.

INDIANA

Hospital News.—Representative men of the state are making a strong endeavor to raise a fund of $300,000 for the establishment of the Children's Hospital of Indiana. Drs. Francis O. Dorsey and Edward F. Hodges are vice-presidents of the association, and Drs. John J. Kyle, Louis Burckhardt, H. R. Allen, Oscar N. Torian, Jewett V. Reed, Edward F. Hodges, and Francis O. Dorsey, all of Indianapolis, are the medical members of the incorporators.——The new De Kalb County Infirmary, built at a cost of $28,000, was opened January 25.

Vital Statistics for January.—The State Board of Health reports that tonsillitis was the most prevalent disease in January as in December; that pneumonia, sixth in area of prevalence, advanced to second place in January, and that bronchitis, influenza, scarlet fever, and measles were unusually prevalent. There were reported 145 cases of smallpox in 24 counties with no deaths; 170 cases of diphtheria in 45 counties with 24 deaths; about 500 cases of scarlet fever with 9 deaths; 352 deaths from tuberculosis; 367 from pneumonia; 115 from accident; 32 from suicide, and 11 from homicide. During the month 2,744 deaths were reported, equivalent to an annual rate of 11.8 per 1,000.

MARYLAND

Addition to Hospital.—Three large wards are to be added to the United States Naval Hospital, Annapolis, at an expense of $83,000. One ward will be a general ward and two will be isolated wards.

Library to Be Dedicated.—The new library building of the Medical and Chirurgical Faculty of Maryland will be dedicated during its meeting in Baltimore May 13-15. Dr. William Osler, to whose suggestion the building is due, is to be the orator of the occasion.

Medical Society Meeting.—At the annual meeting of the George's Creek Medical Society, held in Frostburg, February 25, the following officers were elected: President, Dr. Timothy Griffith, Frostburg; vice-presidents, Drs. James O. Bullock, Lonaconing, and James H. Carpenter, Midland; secretary, Dr. James C. Holdsworth, Eckhart, and treasurer, Dr. W. Oliver McLane, Frostburg.

Personal.—Dr. Clemens von Pirquet, the new pediatrist of Johns Hopkins Hospital, Baltimore, was the guest of honor at the annual dinner given by the trustees of the hospital to the medical board, March 2.——At the meeting of the Johns Hopkins Hospital Club March 8, the program included a paper on "Frère Jacques" by Dr. Howard A. Kelly, and one on "Aretaeus the Cappadocian," by Dr. Eugene F. Cordell.

Defends Its Members.—The council of the Medical and Chirurgical Faculty of Maryland has decided to undertake the defense of Dr. William S. Love, Baltimore, a member who has been sued for alleged malpractice. About five years ago the society adopted the plan of defending its members in such cases without further charge than the membership fee. Several suits have been instituted and some have gone to trial, but in every instance a successful defense has been made. This is one of the advantages offered to the profession by the state society and is duly appreciated by the profession.

Work of the State Board of Medical Examiners.—The president of the State Board of Medical Examiners, Dr. Herbert Harlan, Baltimore, reports the following work of his board in the prosecution of charlatans: In July E. Frederick Morris pleaded guilty and was fined $50 and costs. In August Joseph Politzky was indicted and subsequently, on conviction, given sixty days in jail. In September, Mary Allen, colored, was convicted and fined $25 and costs. Morris Schlein was convicted and fined $20 and costs, and Aristide Giampietro was fined $50 and costs. William G. Thomason was held for court, but being unable to obtain bail, was kept in jail until his trial, when he was paroled. Robert H. Darrah, —— Wilmore, and John Anderson, the last two colored, have been indicted, and their cases are pending in the criminal court. H. W. Swartz, a cancer specialist from Oxford, Pa., was indicted, but will probably get off on a demurrer.

NEW HAMPSHIRE

Acquitted.—Dr. Herbert A. White, North Hampton, charged with murder in the second degree on account of the death of Mary A. Lane by alleged criminal operation, was acquitted February 2 after trial in the superior court at Exeter.

New Constitution.—A conference of the secretaries of county medical societies was held at Concord February 9, under the presidency of Dr. D. Edward Sullivan, secretary of the New Hampshire State Medical Society, to consider the new constitution of the society.

To Reorganize Medical Board.—A bill has been presented to the legislature, which has for its object the reorganization of the State Board of Medical Examiners. At present the board consists of nine members, three each from the regular homeopathic and eclectic schools. The new bill contemplates a board of five members made up without distinction as to school of medicine.

Society Election.—At the fortieth annual meeting of the Manchester Medical Association, held February 18, Dr. William H. A. Lyons was elected president: Dr. Walter T. Crosby, vice-president, and Dr. George C. Wilkins, secretary-treasurer. Drs. Henry A. Christian, dean of Harvard Medical School, and Timothy Leary, instructor in pathology in Tufts Medical School, were guests of honor at the banquet. Dr. Christian delivered an address on "Modern Methods of Investigation in Medicine as Illustrated by Recent Work on Nephritis," and Dr. Leary discussed "Newer Therapeutic Measures of Laboratory Origin."

Hospital Bulletin.—A new quarterly has appeared in Manchester, entitled the "Bulletin of the Beacon Hill Hospital Staff." The reason of being of this publication is said to be the necessity for a channel through which each member of the staff of Beacon Hill Hospital might concentrate his thought on one or more direct lines, and by so doing each would receive benefit from the other's work, and the spirit to always be alert thereby entertained. It is to be compiled from writings of the members of the staff who will also furnish and make reports of interesting cases. The first issue contains three articles by one member of the staff and one each by three other members.

NEW JERSEY

Money for Hospital.—Mercer Hospital, Trenton, was made the beneficiary of the annual charity ball and received $1,800 from this source.

Expelled by Society.—Dr. Albert J. Daly, Bayonne, is said to have been expelled from the Bayonne Medical Society because of his alleged violation of a rule forbidding the making of contracts with fraternal societies for medical aid for their members. Dr. Daly is said to have admitted that he broke the rule and declared that other members of the society had done likewise, and that it was not fair to make him the scapegoat.

Personal.—Drs. Charles L. Ill, Newark, and August A. Strasser, Arlington, have resigned from the medical staff of the German Hospital, Newark.——Dr. William H. McKenzie, Newark, has been appointed physician of Essex county.——Dr. Horace N. Parker, Trenton, is ill with diphtheria at Skillmans.——Dr. G. Howard McFadden, Hackensack, has been appointed physician of Bergen county.——Dr. John C. Loper has accepted temporarily the position of health officer of Bridgeton.——The Gloucester County Physicians' Protective Association has elected Dr. Duncan Campbell, Woodbury, president; Dr. William Brewer, Woodbury, vice-president, and Dr. Harry A. Stout, Wenonah, secretary.

NEW YORK

Henry Bausch Dead.—Henry Bausch of the Bausch & Lomb Optical Co., Rochester, died March 2, in Augusta, Ga., where he had gone for his health.

County Tuberculosis Hospital.—The supervisors of Ontario county voted February 24 to erect a tuberculosis hospital for the county at a cost of $15,000.

Amalgamation.—At a special meeting of the Rochester Academy of Medicine, February 24, questions were considered relative to the amalgamation of the Rochester Pathologic Society with the academy.

Sale of Cocain Restricted.—According to the annual report of the State Board of Pharmacy, the law recently passed regulating the sale of cocain is very effective. Complaint is made in the report that actions for the adulteration of drugs fail because of local prejudices in favor of the defendants.

Friends Pay Fine.—Dr. Snyder, Niagara Falls, who was said to have been fined $25 recently for practicing his profession in Niagara Falls, Ont., has written a letter to the press in which he states that several of his Canadian friends have subscribed the amount of his fine and returned it to him. He furthermore says that he will use this sum, together with fees derived from practice in Ontario until June, for the endowment of a bed in the Niagara Falls General Hospital to bear his name.

Personal.—Dr. Walter C. Klotz, assistant physician at the Stony Wold Sanatorium of Tuberculosis, has been appointed superintendent and medical director of the Vermont State Sanatorium, Pittsford, vice Dr. Henry D. Chadwick, resigned.——Dr. James A. Lyon has resigned as physician at the Loomis Sanatorium, Liberty, and has been appointed official state examiner of candidates for admission to the Massachusetts State Sanatorium, Rutland, with an office at the Massachusetts General Hospital, Boston.

Free Dispensary Opened.—The managers of the St. Lawrence State Hospital, Ogdensburg, announce that there has been established at the institution a free dispensary where indigent persons, suffering from incipient mental or nervous affections, may consult the physicians of the hospital and receive advice. The dispensary will be open on Saturdays from 10 a. m. to 3 p. m. The hospital will not attempt the treatment of such cases, but they will be referred back to the family physician, and a letter will be sent to him summarizing the neurologic and mental findings, and advising as to the management of the case and its medical and hygienic treatment.

To Decrease Death Rate.—To diminish the loss of life in the state is the purpose of a recent communication and blanks sent out by the State Department of Health. The blank forms are a yellow card for the individual reports of tuberculosis by the physician; the statement of procedures and precautions to be taken on the premises of a tuberculosis patient, by the attending physician or health officer; the

blank requisite for supplies; and the circular of information to be transmitted by the health officer to the physician or the patient. The most important blank " "Statement Concerning Procedures and Precautions to be Taken on the Premises of the Tuberculosis Patient by the Attending Physicians or by Local Health Officers," provides for a careful detailed report by the physician as to the housing and domestic conditions of the family, and incidentally the correction of these conditions as far as possible with the aid of the machinery at the disposal of the Department of Health, which includes advice by the physician or health officer, disinfection of the premises, instructive literature, and in a number of cases attendance of a visiting nurse, and through the cooperation of the department of charities the providing of free milk and eggs for those unable to buy these necessaries.

New York City

Physicians Buy Building.—About 100 physicians who have had their offices in the Sydenham, Madison Avenue and Fifty-eighth Street, have formed a corporation and bought the property for $600,000.

Medical Inspectors Appointed.—The city board of health appointed 33 medical inspectors February 24, and of these, 15 were assigned to the Borough of Brooklyn. Early in the year 108 medical inspectors were dropped because of a lack of funds.

Measles Should Not Be Dropped.—The Kings County Medical Society and the Homeopathic Medical Society adopted resolutions, February 18, criticizing the dropping of measles from the list of contagious diseases to be investigated and disinfected.

Scarlet Fever on Receiving Ship.—There are said to have been 11 cases of scarlet fever among men on board the receiving ship *Hancock*, at the Brooklyn Navy Yard, and the patients have been removed to the Naval Hospital. Strict quarantine is being preserved.

To Improve City Hospital.—Plans have been filed for remodeling the octagonal cupola of the Metropolitan Hospital, Blackwell's Island, into four operating rooms. The alterations are to cost $12,000. The dining room and kitchen are also to be enlarged at a cost of $7,500.

Hospital for the Homeless.—An overnight hospital has been instituted by the Commissioner of Charities at the new municipal lodging house in East Twenty-fifth Street. Medical examination of the inmates showed that out of 355 men, women and children who slept at the lodging house, 12 per cent. had infectious diseases.

For Charity.—The will of the late Emma D. Cummins, which has just been admitted to probate, bequeathes to the Pathological Laboratory of St. Luke's Hospital $25,000; and to the Post-Graduate Hospital, the New York Eye and Ear Infirmary, Home for Old Men and Aged Couples, and Home for the Destitute Blind, each $10,000.

Personal.—Dr. A. L. Wolbarst has been appointed consulting genitourinary surgeon to the Central Islip State Hospital for the Insane.——Dr. Marvin R. Palmer has been appointed chief surgeon of the police department, vice Dr. John J. Quigley, deceased.——Dr. Mary M. Crawford has been made house surgeon of the Williamsburg Hospital.

Clearing House for Hospitals Proposed.—To aid individuals who are obliged to go to hospitals in the city, the board of managers of St. Luke's Hospital, and the president of the institution, are asking the cooperation of other hospitals in the establishment of a central office, to which persons needing attention may apply and be directed to the institutions best suited to their individual needs.

Mental Department in Vanderbilt Clinic.—A department has been opened at the Vanderbilt Clinic, to which cases of incipient insanity and borderland conditions may be sent for examination and advice. This department is open Tuesdays and Fridays from 2 to 4 p. m., and physicians referring patients to this clinic will be furnished, when desired, with diagnosis and suggestions for treatment.

New Auto Ambulances.—An automobile ambulance service has been installed at the Flower Hospital, which is conducted in connection with the New York Homeopathic Medical College. This increase in the service has been made on account of the abandonment of the ambulance service by Roosevelt Hospital. The trustees of the hospital have appropriated $50,000 for new wards to provide for the greater number of patients brought in by the improved ambulance service.

McCosh Memorial Fund Grows.—The executive committee for the McCosh Memorial Fund has sent out a report stating that up to February 12, there had been received in money and checks $93,362.60, and in pledges payable at future dates, $6,795; making a total of $100,157.60. The report also asks for further contributions and states that all sums, no matter how small, will be appreciated. The fact that the site chosen for the new Presbyterian Hospital is that selected by Dr. McCosh, increases the scope and opportunity of this memorial.

The Health of the City.—The vital statistics of New York City for 1908 show that there has been a decrease of 20 per cent. in the number of marriages. How much of this is due to the financial depression and how much to the new marriage license law can not be determined, but it is believed that the law had much to do with preventing undesirable marriages. The death rate for 1907 was 18.48, and that for 1908 was 16.52. The campaign of education carried on by the health department is thought to have been a factor in this reduction. There were fewer deaths in the tenements during the summer months, indicating that the fight for the lives of infants is making steady progress. There was an increase of 4,140 births.

NORTH CAROLINA

Mineral Waters to Be Analyzed and Taxed.—The legislature has passed an act providing that all mineral water on sale in the state shall be subject to analysis by the chemist of the State Board of Health, and that a graduated tax be put on all mineral springs in the state that are maintained as an adjunct of, or in connection with, any park or hotel and advertised for the treatment or cure of disease.

McCormack and Wertenbaker Speak Before Legislature.—By special invitation of the General Assembly of North Carolina, addresses were delivered before the legislature, in the house of representatives at Raleigh, February 4, by Dr. J. N. McCormack, Bowling Green, Ky., on "Why and How Good Health Should Be Made More Contagious than Disease," and by Surgeon Charles P. Wertenbaker, P. H. and M.-H. Service, on "Tuberculosis." On the following day appreciative resolutions were passed by the legislature and ordered to be transmitted to Drs. McCormack and Wertenbaker.

Medical Practice Act.—The addition to the medical practice act, passed at the recent session of the legislature, provides for the issuance of a limited license to practitioners unable to pass the usual examination, such license allowing the holder to practice only in specified areas of the state. This addition to the act is evoking much unfavorable comment among physicians, who regard it as a retrograde movement in medical legislation. The statute creating the board of medical examiners was originally enacted in 1859, and was considered for many years a model for many other states, although no penalty clause existed until 1885, when practice without license was made a misdemeanor punishable by fine and imprisonment. This law has been fairly well enforced, even in the remoter districts of the state, and the much-needed sentiment regarding its enforcement has been growing stronger. It is feared by the advocates of a higher standard that the passage of this addition to the act will foist on the profession a large number of incompetents who will apply for license in the limited districts, and after securing license, will locate wherever they please and practice without serious hindrance. If, on the other hand, the board should decline to issue limited licenses, it will immediately become a target for petty court proceedings, instituted by almost any one who desires a limited license, and in addition will put the board in the attitude of refusing to comply with the implied direction of the legislature. Furthermore, some physicians question whether or not it is constitutional to limit the practice of a physician to any restricted territory after license has been granted.

OHIO

Lectures on Tuberculosis.—The finance committee of the senate has appropriated $10,000 for the purpose of employing two lecturers on "tuberculosis" to travel throughout the state, each to receive a salary of $2,000 a year and expenses.

Personal.—Drs. Thomas M. Wright, Warren Coleman, and Wilbur R. Thompson have been confirmed as members of the board of health of Troy.——Dr. David W. Shellabarger, Pottsdam, is reported to be ill with pneumonia.——Dr. Abraham L. Sherick, Ashland, returned from Europe February 27.

Society Meetings.—At the thirteenth annual meeting of the Union Medical Association (Sixth Councilor District Medical), held in Massillon, February 9, the following officers were elected: President, Dr. Simon P. Wise, Millersburg; secretary, Dr. John H. Seiler, Akron (re-elected); and treasurer, Dr.

Harry P. Pomerene, Canton.——**At a recent** meeting of the Stark County Medical Society, Dr. Jacob F. Marchand was elected president; Dr. George F. Zimninger, secretary-treasurer, and Dr. Arthur J. Hill, corresponding secretary, all of Canton. ——Members of the Jackson County Medical Society have formed two classes to pursue the course of postgraduate study suggested by the American Medical Association.

PENNSYLVANIA

Antivivisection Loses.—After the consideration of the antivivisection bill, which absolutely prohibits vivisection, the senate committee on health and sanitation has announced that an adverse report will be made.

Railway Surgeons Elect.—At the annual meeting of the Pittsburg and Lake Erie Railway Surgeons' Association, held in Pittsburg February 18, Dr. John D. Milligan, Pittsburg, was re-elected president; Dr. J. S. Lauthan, Beaver Falls, vice-president, and Dr. Edward M. Island, secretary-treasurer.

State Law on Spitting.—Senator Sproul has introduced a bill which imposes a fine on persons who expectorate in public places, such as the street, railway trains and public conveyances. A fine of from $5 to $50 is the penalty attached for violation of the law, and constables are permitted to arrest violators without warrant.

Personal.—Dr. Raleigh R. Huggins has resigned as gynecologist to St. Francis' Hospital, Pittsburg.——Dr. Joseph R. Swartzlander has been elected burgess of Doylestown.——Dr. Charles A. Rahter, Harrisburg, who has been seriously ill with pneumonia, is reported to be improving.——Dr. Harry J. Donaldson, Williamsport, has been added to the staff of consulting physicians of the Cottage State Hospital, Blossburg.——Dr. Walter W. Palmer, Erie, was operated on in New York City for mastoiditis, February 10.

Donation to Jewish Sanatorium.—The latest donation to the new Philadelphia Sanatorium for Consumptive Jews at Eagleville, Montgomery county, is the gift of the entire site on which the institution is being erected. The land will cost $7,000, and is the gift of the Independent Order of Brith Shalom. Besides this gift, the organizers have raised $5,000 in cash and have secured the pledges of many persons to erect shacks in which the consumptives may live. The sanatorium is to be located on a seventy-acre farm in a very fertile valley and will be ready for occupancy May 1.

Vital Statistics.—During December, 16,185 births and 9,045 deaths were reported in the state. Chief among death causes were pneumonia, 1,127; violence, 835; tuberculosis, 767; nephritis, 493; diseases of early infancy, 469; cancer, 352; diarrhea and enteritis, 272; diphtheria, 254; typhoid fever, 182; scarlet fever, 117; influenza, 91; whooping cough, 72, and measles, 55. During January there were 10,755 cases of communicable diseases reported, including 2,382 cases of measles, 1,791 of scarlet fever, 1,265 of diphtheria, 1,225 of chickenpox, 1,131 of tuberculosis, 1,040 of pneumonia, 921 of typhoid fever, 525 of whooping cough, and 233 of mumps.

New Medical Societies.—The Pathological Society of Pittsburg was organized February 22, with an initial membership of sixteen, and the following officers: President, Joseph H. Barach; vice-president, Dr. Ernest W. Willetts, and secretary, Dr. Shaul George.——A Physicians' Club has been organized at New Wilmington, which will eventually be affiliated with the Lawrence County Medical Association. Dr. Herbert E. Barr is president; Dr. William A. Clark, Jr., secretary, and William L. Smith, treasurer of the organization.——The Woman's Medical Society of Pittsburg was organized February 4, with the following officers: President, Dr. Adaline M. Watson; vice-president, Dr. Luba M. Goldsmith; recording secretary, Dr. Bertha Dornbush; corresponding secretary, Dr. Elizabeth L. Martin, and treasurer, Dr. Katherine Cook.

Compromise on Medical Bill.—As a result of the consideration of the new medical bill before the senate committee on health and sanitation, March 2, a compromise was effected by the different schools of medicine. Under the terms of the compromise an amendment was agreed on, whereby the board of medical examiners, to be appointed by the governor, shall consist of three regulars, three homeopaths and two eclectics. The osteopaths will not be represented, but the state will officially recognize them by licensing osteopaths who are graduates of regular schools or colleges of osteopathy, who have practiced two years, and who have passed the examination of the state board. After 1912 all persons desiring to practice osteopathy must be graduates of an osteopathic college, and to obtain a physicians' certificate, must pass the state examination. All persons who are now practicing osteopathy may continue to do so, but can not procure physicians' certificates unless they are graduates of regular osteopathic colleges and have passed the state examination.

Philadelphia

Dinner to Dr. Mills.—The friends of Dr. Charles K. Mills throughout the country give a testimonial dinner in his honor at the Bellevue-Stratford, March 13, and present him with a loving cup. The affair is in charge of a committee composed of Drs. William W. Keen, Wharton Sinkler, James H. Lloyd, William G. Spiller, Francis X. Dercum, chairman, and David Reisman, secretary.

Personal.—Dr. Joseph P. Tunis sailed for Europe March 4. ——Dr. S. Lewis Ziegler has recovered from his severe attack of facial erysipelas and has sailed for Europe.——Dr. Alfred Gordon has been elected a member of the Société Médico-Psychologique of Paris.——Dr. R. Davis Webb is said to have been committed to the State Hospital, Norristown.——Dr. G. Morley Marshall is taking a hunting tour in Africa.

Water Sterilizers for Schools.—Urged by the health authorities to adopt some means to prevent the spread of typhoid fever and kindred diseases among the pupils of the public schools, the Board of Education, some time ago, equipped seven grammar schools and one high school with water sterilizing plants. The results have been so gratifying in reducing the percentage of diseases in these schools that it is now planned to give wider scope to the experiment. Similar plants will be installed in all public school buildings now in course of construction or to be erected, and the authorities are looking forward to the period when every school building will furnish its pupils with pure drinking water.

Officers Elected.—At the annual meeting of the Section of Ophthalmology of the College of Physicians, Dr. William Zentmayer was elected chairman and Dr. Thomas B. Holloway, clerk.——The Philadelphia Neurological Society has elected the following officers: President, Dr. Theodore H. Weisenburg; vice-presidents, Drs. H. H. Donaldson and George E. Price; secretary, Dr. Alfred R. Allen; treasurer, Dr. John H. W. Rhein; and council, Drs. James W. McConnell, William G. Spiller and Augustus A. Eshner.——The Philadelphia Academy of Surgery has elected the following officers: President, Dr. William J. Taylor; vice-presidents, Drs. Robert G. LeConte, G. Wilym G. Davis; secretary, Dr. Charles F. Mitchell; treasurer, Dr. James P. Hutchinson; and recorder, Dr. John H. Jopson.——At the regular meeting of the Northwestern Medical Society the following officers were elected: President, Dr. Clarence P. Franklin; vice-president, Dr. James T. Schell; secretary, Dr. Harry Hudson; treasurer, Dr. Ellis E. W. Given; and censors, Drs. Nathan G. Ward, William McKeage and Samuel M. Wilson.

VIRGINIA

New Medical Association.—The Isle of Wight Medical Association was organized January 4, with the following officers: President, Dr. John S. Marshall, Smithfield; vice-president, Dr. Gavin Rawls, Carrsville, and secretary-treasurer, Dr. R. Lee Seward, Isle of Wight.

Railway Surgeons Appointed.—Dr. William K. Vance, Bristol, chief surgeon of the Virginia and Southwestern Railway, has made the following staff appointments: Dr. Thomas F. Staley, Bristol, oculist; and local surgeons, Drs. William R. Rogers, Bristol; Lewis E. Mock, Mountain City, Tenn.; Joseph S. Donnelly, Shouns, Cross Roads, Tenn.; David R. Stout, Butler, Tenn.; Eugene E. Hunter, Elizabethton, Tenn.; Henry F. Alexander, Elizabethton, Tenn.; Edward S. King, Bluff City, Tenn.; C. G. Martin, Mendota, Va.; C. T. Barker, Gate City, Va.; Lucian B. Horton, Gate City, Va.; Joseph P. Trent, Clinchport, Va.; James W. Kelly, Big Stone Gap, Va.; William G. Painter, Big Stone Gap, Va.; Morand L. Stallard, Appalachia, Va.; Nicholas I. Ardan, Keokee, Va., and Emmett H. Pomeroy, Black Mountain, Va.

WASHINGTON

Society Meeting.—At the annual meeting of Chehalis County Medical Society, held in Aberdeen, Dr. George E. Chamberlain, Aberdeen, was re-elected president; Dr. Adelbert J. McIntyre, Hoquiam, was elected vice-president, and Dr. Clayton E. Bartlett, Aberdeen, secretary-treasurer.

Opposes the Use of Liquors.—Seventy-five of the 220 members of the King County Medical Society, on February 15, voted for the amendment prohibiting the expenditure of the

society's funds in the purchase of alcohol, malt or fermented beverages to be consumed at the stated social functions of the society.

Antituberculosis Society Organized.—The King County Association for the Prevention and Relief of Tuberculosis was organized at Seattle January 26. Among the organizers were Drs. E. R. Kelly, Elmer E. Heg, Clarence A. Smith, James E. Crichton, Stuart V. R. Hooker, Ivar Jansen, William A. Shannon, Park W. Willis and Kenelm Winslow.

Expelled from Society.—Dr. J. Ellery Fales, health officer of Walla Walla, is said to have been expelled from Walla Walla Valley Medical Association, February 23, on the ground that he had acted in an unseemly manner, privately, officially and professionally. Dr. Fales claims that more than fifteen of the practitioners of Walla Walla have not taken the state examination, and that among these are the foremost ones that have charged him with incompetency. As health officer of the city, Dr. Fales has sent out orders that all physicians shall obey carefully the state laws on vital statistics and health regulation.

WISCONSIN

Tuberculosis Exhibit.—The State Tuberculosis Exhibit at the International Tuberculosis Congress, together with reproductions of other important exhibits, prepared by the department of bacteriology of the state university and the Wisconsin Antituberculosis Association, is being exhibited in the cities of the state, remaining from three to five days in each locality.

Change in Management of Sanatorium.—As the result of a difference of opinion between the State Board of Control and the management of the State Tuberculosis Sanatorium, Wales, Dr. Paull, superintendent, has resigned, and Dr. M. K. Greene, first assistant at the State Hospital for the Insane, Mendota, has been placed in temporary charge of the institution. Dr. J. W. Coon, formerly of Milwaukee, who was offered the position of superintendent, is said to have accepted February 28.

WEST VIRGINIA

Site Not Satisfactory.—The site for the State Sanatorium for Tuberculosis offered by Levi P. Morton at Red Sulphur Springs is not satisfactory to the West Virginia Tuberculosis Commission on account of its inaccessibility, the scarcity of sunlight and the bad condition of the buildings already on the ground.

Society Meetings.—At the annual meeting of the Brooke County Medical Society, held in Wellsburg, Dr. John P. Johnston, Wellsburg, was elected president; Dr. Joseph B. Palmer, Wellsburg, vice-president, and Dr. William T. Booher, Bethany, secretary.——Kanawha County Medical Society, at its annual meeting held in Charleston, elected the following officers: Dr. George C. Schoolfield, president, and Dr. Charles O'Grady, vice-president; and re-elected Dr. Peter A. Haley, secretary, and Dr. Edgar B. Fridenwald, treasurer, all of Charleston.——Cabell County Medical Society, at its annual meeting held in Huntington, elected the following officers: President, Dr. Edward S. Buffington; vice-president, Dr. Joseph E. Rader; secretary, Dr. James R. Jones; treasurer, Dr. Isaac R. Le Sage, and censors, Drs. Karl C. Pritchard and George W. Tooley, all of Huntington.——At the annual meeting of Harrison County Medical Society, held in Clarksburg, the following officers were elected: President, Dr. Jesse S. Maloy, Shinston; vice-president, Dr. Charles W. Halterman; treasurer, Dr. Benjamin F. Shuttleworth; censor, Dr. David P. Morgan; and delegates to the state association, Drs. E. Newton Flowers, Harvey V. Varner, and David P. Morgan, all of Clarksburg.——Marion County Medical Society has elected the following officers: President, Dr. Henry R. Johnson; vice-president, Dr. James A. Graham; secretary, Dr. James W. McDonald; treasurer, Dr. William H. Sands, all of Fairmont; censors, Drs. Edward W. Howard, Fairmont, James A. Riedy and Claude L. Holland, Fairmont, and delegates to the state association, Drs. James J. Durrett and William C. Jamison, Fairmont.——The Little Kanawha and Ohio Valley Medical Society, at its meeting in Parkersburg, re-elected the following officers: President, Dr. Thomas A. Harris, Parkersburg; vice-presidents, Drs. E. T. Castro, Parkersburg, Archibald Bee, Cairo, and J. Young; secretary, Dr. C. J. Scott; assistant secretary, Dr. Rolla Camden; treasurer, Dr. C. W. Hudson, and councilors for Wood county, Drs. Benjamin O. Robinson, Thomas J. Maguire and Will S. Keever, Parkersburg; for Wirt county, Dr. Alexander J. Mitchell, Burning Springs, and for Jackson county, Dr. Jacob E. Bagrows, Ravenswood.

GENERAL NEWS AND COMMENT

Reward for Typhoid Cure.—The Mexican Academy of Medicine has offered a reward of 50,000 pesos (nearly $25,000) for the cause of and to ascertain a cure for the disease. Of this, 20,000 pesos are to be awarded to the person discovering the specific for the disease, 20,000 to the individual discovering the serum which will kill the typhoid germ in the blood, and 10,000 will be distributed among the persons who have most efficiently helped in the solution of the problem.

The Prevention of Blindness.—No one nowadays doubts that a large percentage of blindness in children is the result of neglect to put into effect well-recognized prophylactic treatment. For this reason the necessity is generally acknowledged for routine prophylactic treatment by Credé's or by some similar method. This is emphasized in a pamphlet, "Children Who Need Not Have Been Blind," published by the special Committee on Prevention of Blindness of the New York Association for the Blind. The gonococcus is no respecter of persons, and is often found where least expected, so that a prophylactic measure that under no circumstances does harm, and does good in all cases where indicated, should become a routine practice. The educational and missionary work done by the committee is in the highest degree commendable, and, appealing as it does to the public at large, and especially to midwives, who do so much of the obstetric work in the poorer districts of large cities, should prove an effective factor in lessening the dreadful scourge of preventable blindness in infants.

CANADA

Congress of Physiotherapeutics.—A number of the physicians of Montreal will participate in the second Congress of Physiotherapeutists to convene in Paris, April 13. Dr. Michel D. Brochu, Quebec, is honorary president of the Canadian Committee; Dr. Charles N. de Blois, Three Rivers, acting president; Dr. Henri Lasnier, Montreal, general secretary.

Gifts for McGill.—A friend of McGill University, Montreal, has promised to donate $100,000 to that institution, as soon as the balance of $500,000 is raised. Another friend has made an unconditional donation of $25,000 to the university. McGill needs $2,000,000; but the corporation has decided to let this stand for the present, and to endeavor to get subscriptions for the $400,000 required to ensure the delivery of the $100,000 promised.

Personal.—Lieut.-Col. Herbert S. Birkett, M.D., Montreal, was elected president of the Association of the Canadian Army Medical Corps at its recent annual meeting in Ottawa. ——Dr. Thomas W. Jeffs has resigned his position as medical health officer of South Vancouver, B. C.——Dr. Charles W. Duval, who for the past two years has been pathologist to the Montreal General Hospital and lecturer in pathology in McGill University, has been appointed professor of pathology in Tulane University, New Orleans.

Marine Hospital in British Columbia Poorly Provided.—Recently an order was sent from Ottawa refusing admission to seamen from coasting steamers to the Marine Hospital in British Columbia, and it has caused a great deal of dissatisfaction, owing to the fact that the hospital in the past has been largely used for these seamen. Last year there were less than 100 patients in the hospital, and very few of these were sent in from the deep-sea steamers, for which purpose the marine hospital primarily exists, and who pay the bulk of the sick mariners' fund. The hospital is said to be poorly equipped, and it is claimed that the physicians will not allow serious cases to be handled there. It is supplied with but twenty beds. There is an operating room, but no surgical instruments are provided. Recently an inspector from the Department of the Interior at Ottawa, under whose administration Canada's marine hospital service is conducted, visited this hospital and the order for curtailment followed.

Reciprocity in Western Canada.—There was held recently in the Medical Library of Winnipeg a meeting of the physicians of that city and surrounding country to discuss the proposed measure of reciprocity among the provinces in western Canada, namely, Manitoba, Saskatchewan, Alberta and British Columbia. Dr. Robert G. Brett, Banff, Alberta, was the principal speaker of the evening, and advocated the establishment of a central western examining board for the abovementioned provinces, stating that his province of Alberta was strongly in favor of the scheme. This would mean one examination and one license for the four provinces. Although the measure for Dominion Registration advocated some years

ago by Dr. Roddick is still on the statute books of Canada, it has never become law, owing to the fact that it has been opposed by Ontario and Quebec. It is proposed to call a meeting of the medical men of the west at the time of the meeting of the Canadian Medical Association at Winnipeg in August. Meanwhile delegates will visit in the different provinces and get the individual opinions of the members of the profession on the question.

New Medical Act for British Columbia.—A new medical act for the Province of British Columbia is being promoted in the legislature of the province in the interests of the British Columbia Medical Council. The proposition with regard to the licensing of osteopaths is a unique feature of the measure. The clause relating thereto is as follows: "Nothing in this act shall prevent or prohibit any duly qualified osteopath from practicing his profession for reward or gain within the province of British Columbia from and after the passing of this act; provided, that all practitioners of osteopathy within the meaning of this act shall be duly qualified osteopaths of a recognized school or college of osteopathy; and for the purposes of this act, a recognized school or college of osteopathy shall be deemed to be an institution recognized by the American Osteopathic Association: provided, further, that before any such osteopath shall be lawfully entitled to practice osteopathy within British Columbia, such osteopath shall take and successfully pass an examination satisfactory to the council in the following subjects: Anatomy, physiology, chemistry, toxicology, pathology, bacteriology, histology, neurology, physical diagnosis, obstetrics, gynecology, minor surgery, hygiene, medical jurisprudence, principles and practice of osteopathy. The council, for the purpose of such examination of applicants for registration as osteopaths under this act, shall appoint an osteopath, who shall prescribe the examination for such applicants in relation to the principles and practice of osteopathy. Any duly qualified osteopath who shall successfully pass such examination shall be restricted and shall be entitled to be registered under this act, as a member of the college; provided, that such osteopath shall be restricted wholly to the practice of osteopathy."

FOREIGN

Helmholtz Medal Goes to E. Fischer.—At the recent annual meeting of the Prussian Academy of Sciences, at Berlin, the Helmholtz medal was awarded to Emil Fischer, the well-known professor of chemistry at Berlin, who was the first to produce albumin by synthesis. By a curious coincidence the only other beneficiary was another E. Fischer, the professor of anatomy at Feiburg. He was granted about $1,250 for anthropologic research on the cross-breed population of Africa.

The Catastrophe in Southern Italy.—The *Policlinico*, Feb. 14, gives a list of the medical men known to have lost their lives in the earthquake at Messina, fifty-one in all. Only nine left surviving children, including six boys between 3 and 15 and one girl of 17. Our exchange refers in moving terms to the physicians who survived the disaster, but whose losses in family, friends and property make them envy the fate of those buried under the ruins. The *Policlinico* in a previous issue referred to the action of the Rome correspondent of the *Münchener medizinische Wochenschrift* in appealing to the physicians of Germany for aid for the stricken medical men in Sicily, deploring it as an act of weakness to appeal for outside help. At the same time it expresses deep appreciation and gratitude for aid from outside spontaneously rendered. The appeal in our German exchanges for contributions to the international fund, "Pro Italia medical," is signed by a numerous committee, the list of names filling nearly a whole column of solid type, with von Bollinger of Munich as chairman. The amount contributed in Germany to the fund was 3,780 marks (8950), February 16. Dr. Calendoni of Naples was in one of the first medical relief parties at the scene of the disaster, and he summarizes his impressions in a communication in the *Presse Médicale*, February 13. He estimates the number of dead throughout the quake district as about 200,000. Many lives were lost in the flight in the darkness of the night and the thick dust that filled the air when the persons had escaped the shock of the earthquake. Many instances of serious mental disturbance were encountered with entire absence of physical injury. Numbers of the rescued were in a kind of stupor, apathetic, speaking of their losses as if they did not concern them or had happened twenty years ago. He noticed that the pupils were dilated in most of these persons, and some of the facial muscles were contracted. So many persons escaped from upper stories by letting themselves down by sheets tied to the windows, that these floating sheets gave a peculiar aspect to the ruins. In some cases every bone in the body seemed to be fractured, including the skull and vertebræ, but fracture of the femur was most common. Complications began to develop after the first few days, phlegmons, gangrene and tetanus, the latter appearing about the eighth day. The gangrene occurred in parts that had been long under crushing pressure. A number of cases of catalepsy, chorea and epilepsy were observed, and many of the survivors succumbed to acute respiratory affections, the result of exposure to the rain and cold. As late as the fourteenth day twenty-seven persons were saved; many had had nothing to eat during this period. The fifteenth day a little girl of three was rescued safe and sound after her long fast. A few were found alive the nineteenth day, but most of these human larvæ, he says, succumbed soon after their deliverance. One lad of 9 succeeded in making his way out from under the ruins the nineteenth day. The childish mind could not grasp the catastrophe, and the children were in good spirits as a rule. Two little ones were found playing merrily on a bed with some kittens in the midst of ruins that had buried all their family. One boy injured himself severely in digging all day but his face was radiant as he had finally rescued his father. It was a great field for the neurologist, but there was no time and no one had the sangfroid for specialist research then.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, Feb. 27, 1909.

The Polyclinic

The difficult financial position of the Polyclinic has been mentioned in a previous letter. The annual subscription of $5 has never been sufficient to pay the expenses and left the large sum of $4,500 to be raised by class and laboratory fees and increased subscriptions which had to be solicited again. To help remedy this, 174 subscribers expressed their willingness to subscribe various amounts which would increase the income by $1,500. As the Polyclinic was still faced by a large deficit it was determined to close it, but Sir Jonathan Hutchinson, who may be regarded as its founder, munificently undertook for two years to provide the deficiency. Capt. Hayward Pinch, who has ably filled the position of medical superintendent for nearly ten years, has to the great regret of everyone resigned his post, as he has been appointed director of the radium institute. Some valuable additions have been made to the Hutchinson Museum, and the whole collection is now classified and arranged in such a manner as to permit of speedy and easy reference.

Congress on Tropical Diseases in India

A congress on tropical diseases, opened at Bombay February 22, was attended by representatives of all parts of India and by Professors Ronald Ross of Liverpool and Shiga of Japan and Dr. Musgrave of the Philippines. This is the first congress of the kind and it has created widespread interest. All the Indian administrations deputed delegates and local bodies and individuals provided ample funds. There were five sections which sat for three days, and papers were read covering every branch of tropical disease. The proceedings were opened by the governor, Sir Charles Clake. In a paper on "Malaria," Professor Ross urged the government to set aside from the sanitary budget for the prevention of malaria a sum proportionate to the mortality from the disease. He advocated the destruction of mosquitoes in large towns, quininization in rural areas, and both methods combined during malarial epidemics. In a combined paper, Captain Christophers and Dr. Bentley discussed "The Human Factor in the Causation of Malaria." They found that in a community composed of malaria-stricken subjects in a state of physiologic poverty, infection diminished very slowly, even in the absence of the anopheles. This factor of residual infection might thus convert the whole community into a reservoir of infection, ever ready to involve its neighborhood in an epidemic and capable, on migration, of diffusing malarial infection far and wide.

National Tuberculosis Conference

A National Conference on Tuberculosis has been held in London, the object being to arouse the nation to a sense of its duty in the eradication of a disease which is preventable and yet causes more deaths than all other diseases combined. The conference is of a popular rather than a scientific nature, though papers have been contributed by various medical au-

thorities. Archdeacon Sinclair, who presided at the opening meeting, said that physicians had done their utmost in fighting the disease and the public must now do their share.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, Feb. 23, 1909.

The Reorganization of Medical Studies

An official decree of January 11 last has reorganized the medical curriculum along the lines I outlined in THE JOURNAL, Sept. 19, 1908, page 1023, and Jan. 9, 1909, page 145. The minister of education has now sent to all the institutions involved a circular relative to the application of this decree. The minister recalls the long time spent in deliberation on the details of the reform; the investigations made from the start among all the faculties of medicine; the labors of the commission of 77 members, which includes not only professors of the faculties and medical schools, but members of parliament, men especially qualified by their work; physicians to the hospitals, and representatives of the principal medical associations. The minister says that it is reasonable to hope that a decree which has been prepared with so much care will contribute notably to the betterment of the course of medical study: "fortifying at the same time by assiduous and methodical frequenting of clinics and laboratories the scientific and professional education of the future physician, impressing on him by all possible means and in all forms the habit of observation and experimentation, developing in him at the same time the sense of duty and responsibility—such is the end proposed. The faculties and medical schools will undoubtedly understand how important it is that the application of all the provisions of this decree should be surrounded by the most serious safeguards." Before fixing the date at which the reform shall come into force the minister desires to be informed precisely what measures the faculties intend to take to ensure the new organization in the best conditions possible. He invites them to deliberate on the matter and requests their opinion before the first of May.

The International Sanitary Office

As I mentioned in one of my previous letters, the delegates of the various countries which took part in the international sanitary conference, which assembled at Rome in December, 1907 met again at Paris, in November last, and proceeded to organize the bureau of the international sanitary office (see editorial in THE JOURNAL, February 27, page 708). This office has just been installed at 195 Boulevard Saint-Germain. It will centralize all the information concerning the great epidemic maladies, such as cholera, plague and yellow fever. It will indicate to the participating governments the modifications that should be made in international sanitary agreements, in order more effectively to combat these scourges and to prevent their propagation by circumscribing the foci of infection. The office will publish collective studies on the course of epidemics throughout the entire world and will publish the general regulations promulgated by the various sanitary administrations. The first task of the sanitary office will be to occupy itself in arresting the ravages of cholera which continues to flourish in Russia, and to prevent its transmission to other European countries. The office will also investigate what measures are to be taken to meet the danger created by direct railroad communication between Mecca and Syria. This is a situation demanding urgent regulation by appropriate international measures, which the office will have to study and point out to the interested governments.

The Medical Charges in Industrial Accidents

Of late abuses have been noted in regard to the medical expenses that employers or insurance companies are called to pay for the professional aid rendered to the victims of industrial accidents. With a view to remedying this abuse, as much as possible, the minister of labor recently appointed a special commission, composed of physicians and surgeons to the hospitals, to seek for an equitable adjustment of the medical charges in the matter of industrial accidents. The minister requested this commission to examine whether for the principal classes of accidents it might be possible to estimate the normal duration of the period of incapacity for work on which to base an estimate of proper medical charges. The commission, after studying and discussing the question, unanimously reported that under existing conditions the data both of information and clinical experience are insufficient to allow of such an estimate.

The Chair of History of Medicine and Surgery

The professors of the medical faculty of Paris at a board meeting nominated Chauffard as first choice and Dupré as second choice for the chair of the history of medicine and surgery, to succeed Prof. Gilbert Ballet, who has been appointed clinical professor of mental pathology and diseases of the brain. The names of these candidates were accordingly presented to the minister of education as the choice of the faculty.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, Feb. 18, 1909.

Modifications in the Requirements for the Medical Degree

The requirements for the title of doctor of medicine in the Berlin University have been lately considerably simplified to keep pace with modern progress. The dissertation in Latin was long ago dispensed with. The fees for the ordinary examination, the "*Kolloquium*," have been reduced from 440 to 300 marks ($110 to $75) and in the exceptional cases in which the severer examination, the "*Rigorosum*," is taken, from 660 to 500 marks ($165 to $125). The public presentation and disputation of a thesis are now abolished, as well as the Latin doctorate oath. The dissertation need no longer be on a strictly medical theme, but any subject bearing an instructive relation to medicine as a science or art may be chosen. In the *Rigorosum* examination pharmacology may be offered instead of physiology. The certificate of attendance at lectures has been also dropped from the requirements at Berlin, as an experiment. This was done at Bonn some time ago. This requirement was quite superfluous and served only to annoy both students and professors, while it failed to secure the attendance of students to the end of the semester. The students often got their comrades to certify to their attendance and left town before the lectures were over.

Call of Professor Pfeiffer to Breslau

As intimated in my previous letter, Pfeiffer, one of the youngest pupils of Koch, and who, as is well known, was the discoverer of the influenza bacillus, has taken the place of Flügge at Breslau.

The Conflict at Cologne

The trouble between the physicians and the insurance societies at Cologne still continues. The "*Krankenkassen*" have been able to secure only fifty-two physicians, and as these are not enough to care for the insured, trouble is anticipated shortly and it is believed that the government will be compelled to take a hand. It is of course impossible to predict in what direction the influence of the authorities will be exerted.

Army Sanitation

British authorities have published a comparison of the morbidity and mortality in the armies of the various nations which, according to the opinion of Dr. Schwiening, staff physician of the German war department, does not correctly represent the facts. According to the British figures the admissions for sickness per 1,000 of the force were for Great Britain and Ireland, 438; for France, 670; for Germany, 610.4; for Austria-Hungary, 1,179.8, and for Russia, 412.2. The British figures, however, are based on admissions to hospital, those of the other nations include also ambulant patients. If these were added, the number for Great Britain would rise to 931.5. It is impracticable for various reasons to compare the British army with other armies, and Dr. Schwiening concludes that the statistics referred to are liable to give false impressions of the real condition as to the health of the various armies.

Twenty-fifth Anniversary of the Discovery of the Cholera Bacillus

In the *Deutsche medizinische Wochenschrift*, February 14, Professor Fischer, the hygienist in Kiel, gives an interesting review of the circumstances and effects of the discovery of the cholera bacillus which was announced in this same journal just twenty-five years before. He recalls that this discovery has been influential in overthrowing the theory of Pettenkofer that the virus of cholera must be matured in the soil, and it has demonstrated the possibility of transmission of cholera by drinking water so that the character of preventive measures against this disease has been changed to correspond with those employed against other infectious diseases. The success of this method has been manifested anew during the

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recent epidemic in Russia: by the earliest possible diagnosis and isolation of cholera cases, Germany has been kept free from the spread of cholera since the great epidemic at Hamburg in 1892.

Sunday Rest for Pharmacists

In Saxony the Minister of the Interior has directed that pharmacies shall close at 1 p. m. on Sundays and holidays instead of 2 p. m., as hitherto, thus securing an additional hour of rest. The *Verein Berliner Apotheker* has for some time been trying to ensure a period of rest on Sundays by providing for alternate closing of the drug stores in various parts of the city, but the plan has not succeeded on account of the opposition of a large proportion of the proprietors.

Influence of Antitoxin on Diphtheria Mortality

As some epidemiologists do not yet admit the value of antitoxin in lowering the mortality from this disease, new statistics on this subject are still of value. Some recently published in the *Archiv für klinische Chirurgie* show that between 1882 and 1893, 71.2 per cent. of the tracheotomized children died, while from 1903 to 1908 only 35 per cent. died. Of those who were not operated on, 26.3 per cent. died in the former period and only 9.11 per cent. in the latter. That the mortality is greater the later the injection is deferred, is shown by the fact that only 6.98 per cent. died of those in whom the injection was made on the first day of the disease, while of those not receiving the antitoxin until the sixth day, 45 per cent. died.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, Feb. 23, 1909.

Report of the Street Ambulance Corps for 1908

The statistical and financial year-book of the Vienna *Rettungsgesellschaft* for 1908 gives some interesting facts and figures in regard to the work done by the ambulance corps. Altogether, 30,762 cases were dealt with, an average of 85 daily. Among these were 6,980 sudden attacks of illness, 9,828 accidents and injuries, 980 suicides, attempted or accomplished, 345 cases of sudden attack of mania, and 12,570 cases of illness requiring the patient's removal from his home to the hospital. In 145 instances so-called flying ambulances were established; that is, ambulances were provided prophylactically, so to speak, whenever it was thought that the presence of a multitude of people (as, for instance, when the pageants and public spectacles in celebration of the emperor's jubilee last year drew immense crowds) might give rise repeatedly to the need for medical assistance. These flying ambulances have proved very satisfactory and have received the approval of the authorities. Apart from the aid thus rendered, the corps deserves credit for its training, given to men and women, in the work of first aid. No less than 1,900 persons, drawn from all classes of the population, were trained last year in 20 "Samaritan classes." The Samaritan expedition to the seat of the Italian earthquake could not well be included in the report, as it took place on the last day of the year. The entire expenditure for the year, including a special donation of $5,000 for an accident station, to be erected soon, amounted to only $52,000, while the income was about $15,000 more, all from private contributions. The *Rettungsgesellschaft*, now in its twenty-seventh year, is a favorite with the people, because neither racial nor religious prejudices are allowed to play any part in its management or administration, which can not be said of all our charitable institutions. It was founded under the shadow of the awful disaster in 1881, when the municipal theater burned down and 800 persons perished for want of organized immediate aid. Since then the excellent organization of the *Rettungsgesellschaft* has served as a model for numerous ambulance corps in Germany, England, France and Italy. In fact, its abolition would now mean a serious calamity for this city. Its medical staff consists of 20 doctors; there are 22 attendants; and the equipment comprises 70 cars, besides 2 automobile cars, specially fitted for emergency cases and the transportation of patients, and the 3 kitchen cars previously mentioned.

The Use of Tobacco in Austria

Within the last ten years the use of tobacco has increased in this country by nearly 75 per cent. The minister of finance is well satisfied with the revenue thus obtained, but the medical aspect of the matter is not so satisfactory. The increase is due chiefly to the improved quality of cigarettes, of which more than 2,500,000,000 were smoked last year; the heavier cigars were also largely used, while the lighter cigars, with a nicotin percentage of 2.5 to 3.5, were rather neglected. The pipe is not very much used here. At the instance of medical authorities, the government has introduced "nicotin-free" cigars—so called, but really only nicotin-poor—the original nicotin content having been artificially reduced to about one-fourth of the original amount. There has been no increasing demand for this kind of cigars and cigarettes. It has been found that the industrial classes consume no more tobacco than do the agricultural classes, though, naturally, in towns there is more of a tendency to smoke to excess. The cigarette accounts for the extension of the habit of smoking to women and to children under 16. It has been estimated that, taking the male population of Austria between the ages of 20 and 60 as a basis of calculation, and making no allowance for the numerous non-smokers of cigarettes, the daily average of cigarettes smoked is about five for each individual. The snuffing of tobacco has become almost unknown here. The entire demand for snuff did not exceed two tons last year for a population of about 27,000,000.

Celebration of the Hundredth Anniversary of Darwin's Birth

The Vienna medical and biologic societies have each recently commemorated the hundredth anniversary of Darwin's birth by impressive exercises. Prof. B. Haatschek, speaking before the *Biologische Gesellschaft*, pointed out how Darwin's theories had enabled others to erect a definite structure of ontology and phylogenesis. The municipality of Vienna paid its tribute to the great man by naming a street in his honor.

1. THE JOURNAL, Feb. 13, 1909, p. 573.

Pharmacology

ADVERTISED CLAIMS FOR COLLARGOL

Report of the Council on Pharmacy and Chemistry

The attention of the Council on Pharmacy and Chemistry has been called repeatedly to the extreme and extravagant claims made for collargol, a product which the Council has accepted. The following are examples of such claims and appear in the advertising matter distributed by Schering & Glatz, the American agents for the preparation:

"COLLARGOLUM

"Is a powerful and harmless systemic antiseptic in the most varied medical and surgical infections. It checks beginning sepses and often effects brilliant recoveries in desperate ones. Recent investigations show that with its direct bactericide energy it exerts a marked electrolytic [*] and leucocytogenetic action, and thus greatly aids the natural protective forces of the body.

"Used topically, by mouth, rectally, intravenously or by injunction, Collargolum forestalls the development of sepsis from accidental or operative wounds or child-birth, arrests beginning medical and surgical infections, and often achieves brilliant recoveries in apparently hopeless cases."

Since these and similar claims were considered extravagant and unwarranted, a motion was adopted to rescind the approval of collargol and to publish the reasons therefor. Later, this action was reconsidered in part, and in place of it, it was moved that the matter be referred to a committee of three—a surgeon, a pharmacologist and an internist—to be composed of men not members of the Council. Dr. J. T. Bottomley, Boston, Dr. C. W. Edmunds, Ann Arbor, and Dr. David L. Edsall, Philadelphia, were appointed and accepted the position.

Schering & Glatz, having been advised of the appointment of this committee, objected and requested that Dr. S. Solis Cohen, Philadelphia, Dr. Reid Hunt, Washington, D. C., and Dr. Roswell Park, Buffalo, N. Y., be added to the committee. This request the Council agreed to and these gentlemen were asked to serve. Drs. Cohen and Hunt accepted the position, while Dr. Roswell Park declined to serve. Accordingly, the committee was constituted as follows: Dr. Edsall, chairman;

* When action was first taken Messrs. Schering & Glatz asserted that the Council misquoted one claim and said "We never asserted that Collargolum possessed a marked 'electrolytic' action." When referred to their own pamphlets for verification, they replied that the word "electrolytic" was "a typographical error for electrocatalytic." Later Schering & Glatz said: "Our friends state that in speaking of the actions of Collargolum the word 'electrocatalytic' should be modified to read 'catalytic' . . . "

Dr. Edmunds, Dr. Bottomley, Dr. S. Solis Cohen and Dr. Hunt. It should be noted that while the members of the committee selected by the Council were non-members of the Council, Dr. Edsall was later appointed a member by the board of trustees.

Two reports have been submitted by the committee, a majority report signed by Drs. Bottomley, Edmunds, Edsall and Hunt, and a minority report signed by Dr. Cohen. Both reports agree on the point at issue, viz., that the advertising matter issued by Schering & Glatz is misleading, both through exaggeration and misquotation.

It was moved that both reports be accepted and published, and that the thanks of the Council be extended to the members of the committee. The motion having been adopted, the reports of the committee were sent to Schering & Glatz, who replied, and their reply was submitted to the committee. The committee reported to the Council recommending minor changes in the report. The Council then voted to adopt the report as amended and directed publication. In accordance with this action, the majority and minority reports of the committee are published, appearing on page 862 of this issue.

W. A. PUCKNER, Secretary.

THE NECESSITY FOR PURE FOOD LAWS

Some Analyses Made by the New Hampshire State Board of Health

To one interested in the subject of adulteration and sophistification of food, drug and liquor products, the twentieth report of the New Hampshire State Board of Health will prove interesting reading. In that portion of the report dealing with food, drug and liquor inspection, chemist C. D. Howard gives the results of the examinations of 856 samples of food, of which no fewer than 319, or 37.2 per cent., failed to conform to the pure food law. As it was the practice only to collect such brands as there was reason to think were sophisticated, the proportion is probably higher than would prevail generally.

"SOFT DRINKS"

Attention is called to the composition of many of the artificially colored concoctions sold as "tonics" and "soft drinks" now on the market. We are told that many of "these preparations consist of nothing more than sweetened carbonated water colored with anilin dye and flavored with compounds prepared solely from chemicals. Bottlers are continuing to label such products in generous-sized type as 'strawberry,' 'raspberry' and 'blood orange,' the only concession made to the food act being the statement in small type on the *cap* of the bottle: 'Artificial color and flavor.'"

The results of the examinations of 19 of these preparations show that benzoate of soda, saccharin, salicylic acid, sulphurous acid and chemical dyes all enter into the composition of "soft drinks."

CATCHUP

While in the manufacture of catchup the New Hampshire law "allows the use of benzoate of soda in quantity not exceeding 0.1 per cent., provided the presence of such is stated," the chemist states that the present sentiment of food inspection officers is "practically unanimous in opposing the use of preservatives in this and other articles of food. . . ." He calls attention to the fact that some of the leading manufacturers have entirely discarded the use of preservatives, and he adds that it is "probable that the only thing that will deter other concerns from eventually adopting the same practice will be either the lack of proper sanitary methods of manufacture or the use of refuse material—or both."

Of 7 brands of catchup examined, all containing either benzoate of soda or salicylic acid, four were colored artificially, one was sweetened with saccharin and the presence of preservatives was not declared on the label in four.

VINEGARS

In discussing vinegars, the report says: "The argument that 'vinegar is vinegar and one kind is as good as another,' is not true, and it is but right that the purchaser, as well as the grocer, should, for his own protection, have some means of knowing the grade and variety of goods with which his order is filled." That this position is tenable is shown by the results of 24 analyses made of cider vinegars in which the chemists were obliged to adjudge the products "spurious," "not genuine," "below standard," "artificially colored," "distilled vinegar sold as cider vinegar," and so on.

FLAVORING EXTRACTS

Probably the greatest degree of sophistication is found in preparations of this class—lemon, vanilla and orange extracts. Of lemon extracts examined, 64 per cent. were not conformable to the law, while of the vanilla and orange extracts the percentages of non-conformity were 44 and 54, respectively.

PRESERVES

A preparation sold as "raspberry preserve" was found on analysis to consist mainly of apple stock and was, therefore, illegally labelled. The same material—apple stock—was found to compose very largely a "raspberry jelly," which was examined, while a "currant jelly" contained "little if any currant."

OTHER ANALYSES

In addition to the numerous analyses of foodstuffs, Chemist Howard gives the results of his investigation of several "patent medicines" and liquors. Among the former is Rupert Wells' fake "cancer cure," Radol. We understand that the New Hampshire Board of Health brought this nostrum and its method of exploitation to the attention of the Postoffice authorities, whose "fraud order" against Rupert Wells was the subject of an article in THE JOURNAL, Feb. 20, 1909.

This and similar work that is being done by several of the more progressive state boards of health is the highest kind of public service, not only for the specific information that is thus furnished, but for its educational value.

Ecthol

To the Editor:—Can you give me any information concerning "Ecthol" (Battle & Co.), marketed as an "alterative and antiseptic"? In one instance I have unwillingly prescribed it, with apparently no effect.

W. D. CHAPMAN, M.D., Silvis, Ill.

ANSWER.—Ecthol, advertised in a style typical of nostrums, is said to contain as its active ingredients *Echinacea angustifolia* (Pale Purple Cone Flower) and *Thuja occidentalis* (Arbor Vitæ). Neither of these drugs is official in the U. S. Pharmacopœia and information concerning their therapeutic value amounts practically to unverified claims that they are useful as alteratives and in certain inflammatory conditions. The viciousness of vaunting an internal remedy for serious septic conditions without ample basis of fact is self-evident. A pamphlet before us, entitled "Ecthol in the Sudan," is a fine example of nostrum advertising, calculated to captivate the unthinking physician with its show of science and to mislead him into believing that the remedy exploited has been endorsed by high authority. It begins with a eulogy of the Wellcome Research Laboratory at Khartum, Sudan, and its second report, and the work of the laboratory is described and praised. In close connection with this praise of legitimate scientific work, we are told that ecthol is used in the Sudan, "and that it is regarded as almost a specific in certain classes of diseases." The reader is left to infer that its use is described in the report, although the advertiser is careful not to say so. Three pictures of patients with smallpox, chickenpox and syphilitic ecthyma, respectively, are reproduced from the report and without apparent break in the article we are told that "it is in precisely such cases that ecthol gives its most striking results." Of course, the Wellcome Research Laboratory report contains no such mention of ecthol. While such attempts to bolster up a preparation by weaving its praises into an account of a strictly scientific report may be "good business," it is in fact *prima facie* evidence of the valuelessness of a remedy apparently unable to stand on its own merits.

Correspondence

Benzoate of Soda in Foods

To the Editor:—The preservative question, more especially regarding the influence on health of sodium benzoate, may be considered from a different point of view than that taken in your recent editorials. You state that the experiments of the referee board extended over a period of four months while those conducted in the Department of Agriculture extended over nearly a year. The facts are that the department subjects each received 35 grams or less of benzoic acid or sodium benzoate during twenty days and in a supplementary study 12.5 grams during ten days; while the subjects of the referee board each received about 125 grams of sodium benzoate during ninety days. Furthermore, the results in the two series are in substantial agreement. I clearly pointed out, before the report of the referee board was announced (*Medical Record*, Jan. 2, 1909, p. 16), the evidence presented in Bulletin 84, Part IV, does not establish any injurious effect of benzoic acid and the benzoates; there was simply an error in the interpretation of the results.

It is fair to believe that a board composed of men of such scientific attainments and unimpeachable reputation has employed the degree of caution in the wording of their decision that the results call for. When, therefore, they state as a general conclusion: "Sodium benzoate in small doses (under 0.5 gram per day) mixed with the food is without deleterious or poisonous action and is not injurious to health" it is difficult to understand why the verdict is not positive and to the point. I believe those capable of appreciating it without bias see in this report the conclusion that benzoates in themselves are harmless.

Those who have opposed the use of sodium benzoate on the score that it is harmful now declare that its use is objectionable because it may cover inferior raw material. This is an evasion of the original point and obviously an after-thought; furthermore, it is not supported by any evidence. All physicians and food experts are agreed that objectionable raw material should not be used in the preparation of food. As to that, however, the very use of this preservative tends to raise the quality rather than lower it, as appears from a consideration of the catsup industry. Here tomato pulp is kept for a variable interval pending the preparation of the final product. Sodium benzoate causes the pulp after one cooking to keep without fermentation or molding. When a preservative is not used frequent cookings are necessary; moreover, masses of mold must be removed by straining. This has the effect of making the final product more concentrated but removes the fresh vegetable flavor and hence impairs the condimental value of the product. It is stated that in this concentrated form the purchaser receives greater value, but as catsup is a condiment, not a food in the caloric sense, the loss of vegetable flavor detracts immeasurably more than the greater concentration adds to its value. Indeed, the whole argument against sodium benzoate produces the impression of an effort to mislead the public rather than to give due regard to the facts.

E. E. SMITH, M.D., New York.

Practice of Medicine by the Unfit

To the Editor:—It is a matter of sincere regret that such contributions to the discussion of present-day treatment of disease of the value, intelligence and beneficence of the article entitled "The Practice of Medicine by the Unfit," by the Rev. George A. Gordon will receive but little attention from those lay journals who find the "featuring" of the newest of these propagandæ a matter of interesting news. In a long newspaper account of a Sunday sermon preached recently at a university chapel, the marvelous cures of a "young woman," a "district attorney" and a "wild young man" were given as exhibits of the working powers of a specified cure.

As a matter of fact, the only real thing to marvel at in the whole affair is that newspaper readers should find such literature translated from the advertising to the reading columns of their journals and promulgated from the purlieus of a university by a theologian instead of from the headquarters of a medicine concern by an Indian or a herb doctor. Photographic, documentary and legal evidence long ago convinced even the most skeptical of newspaper readers that such recoveries were of at least daily occurrence among many of our "best" people who publicly patronized, extolled and partook of the many lavishly and legitimately advertised remedies but recently in vogue.

It seems a long cry from a panacea in a bottle to mere "talk" as a means of cure and from newspaper and out-door advertising to the utilization of a famous seat of learning as an agent of publicity, but the proceedings of the Sunday above referred to would appear to have encompassed both these ends for the latter dispensation in a highly finished and gratifying manner.

JOHN P. DAVIN, New York.

Wells, Darwin and Haeckel and the Doctrine of Evolution

To the Editor:—All thinkers are one in admiring Ernst Haeckel, who has retired after giving to the world important, if not indispensable science.

A meritorious esteem existed between Darwin and Haeckel. Darwin exalted Haeckel's perception of evolutionary principles, while Haeckel praised Darwin's discovery of the principle of natural selection, the law of organic evolution, which science considers the greatest light to lead to biologic truth.

Haeckel exhaustively reviews the history of evolution but omits the name of Wells, and thus commits a great error, for this omission, due to a lack of information, is inexcusable, inasmuch as Haeckel had as good an opportunity as Darwin to learn of Wells' work in biology.

William Charles Wells, of Charleston, S. C., solved the problem and turned over to thinkers and doers the key to unlock, in a more or less routinary way, the door leading to the sublimities of life, that all inquiring minds might see for themselves.

N. B. JENKINS, M.D., New York.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

SENSITIZATION AND DIPHTHERIA ANTITOXIN

To the Editor:—From several notices of deaths following the administration of diphtheria antitoxin, I have gathered the impression that, when a person is sensitized, antitoxin is no longer safe. This, if true, is so very important that I want to have a clearer understanding of it. Just what is meant by sensitized? What produces the condition and how long does it last?

N. F. CHIEVER, Greenfield, N. H.

ANSWER.—The condition of sensitization is one that has been frequently discussed both in the editorial and news columns of THE JOURNAL, but as there seem to be many who are in doubt as to the exact status of the subject we will here recount its chief features.

When an animal receives a single dose of almost any sort of soluble protein by sub-cutaneous, intravascular or intraperitoneal injection, it becomes after a period of ten days or two weeks susceptible to a second injected dose of the same protein, so that this protein is now extremely toxic for the animal and may cause its death in a few minutes. Not all animals react alike in this respect, guinea-pigs being most readily sensitized and intoxicated, while some of the other common domestic animals do not exhibit the characteristic features at all strikingly or typically. Up to the present time the exact nature of the reaction is entirely unexplained. It seems to concern only protein substances, and the amount of protein necessary to sensitize an animal is usually extremely small—one-twenty-millionth of a gram in the case of egg albumin, and correspondingly small amounts of serum. An animal is said to be sensitized when it has received a single dose of the protein a long enough time previously, at least eight days, so that it will react to a second or intoxicating dose. The condition of sensitization seems to last throughout the life of the sensitized animal, at least in the case of the guinea-pig, and it is transmitted to the offspring of sensitized females.

We do not know to just what extent we can apply the results obtained by animal experimentation on this subject to the human being. It is certain that occasionally a person has been violently intoxicated by an injection of antitoxic serum, the symptoms being

identical with those observed in sensitized guinea-pigs, and so we feel justified in assuming that man may become sensitized to horse serum. However, while some of the human cases of acute intoxication with foreign serum have occurred in patients who had been apparently sensitized by a previous injection of antitoxin, yet in not a few the poisonous injection was the only injection of serum the patient had ever received. It has been frequently recorded in these cases that the patient was afflicted previously with asthma, especially with "horse asthma," in which the attacks follow contact with or proximity to horses; while in some cases the patients have had an idiosyncrasy to eggs or to some other protein food, although many of the patients gave no history of any such conditions. These cases suggest that certain persons may become sensitized to foreign proteins by some other means than injection, and possibly they are congenitally susceptible. In any case, one should always seek to ascertain before injecting serum for therapeutic purposes, whether the patient has any such idiosyncrasy as is mentioned above, and if so to avoid the use of serum if possible, or, when unavoidable, to exercise the precautions mentioned below.

As to the sensitization of man to serum by therapeutic injections our information is confusing. Serum has been injected twice into the same person at intervals of eight days and over in many thousands of cases, either without any evidence whatever of any condition of sensitization, or at the most with local reaction or rashes of various degrees of intensity. This fact may be considered as evidence that man is not readily sensitized to foreign serum, or it may be that the rate of absorption of serum injected subcutaneously is so slow that serious intoxication is not likely to follow. In this case we can imagine that serious results only follow when the second dose of antitoxin is inadvertently injected into a blood vessel in a person who has been previously sensitized or who is naturally sensitive to foreign proteins. In view of the enormous number of cases in which patients have received a second dose of antitoxic serum without harm, it would not seem that antitoxin should be withheld on this account in cases in which it is urgently needed, although one should avoid unnecessary prophylactic injections or the use of sera of doubtful utility (antistreptococcus serum, etc.) When serum must be given to a person whom there is reason to believe has been sensitized, the following precautions might be taken. A single small dose, say half a cubic centimeter, should precede the main injection by one or two hours or more—It is probable that such a dose would not often be seriously intoxicating by the subcutaneous route, and after recovering from the effects of the second dose the individual is refractory to a third dose. Also great care should be exercised to prevent injection of serum into the blood vessels, by using a glass syringe and aspirating gently before injection—if the point of the needle is in a vessel blood will enter the syringe and another site should be sought.

WORKS ON DIETETICS AND CHEMISTRY OF FOODS

To the Editor:—Will you kindly inform me through your "Queries and Minor Notes" of some good modern works on dietetics and the chemistry of various foods and their influences on metabolism?

JOSEPH RAYE SHUMAN, Sunnyside, Wash.

ANSWER.—The following are reliable works on this subject:

Von Noorden, K.: "Metabolism and Practical Medicine," W. T. Keener & Co., Chicago, 1907. Net $16.00.

Wiley, H. W.: "Foods and Their Adulteration," P. Blakiston's Son & Co., Philadelphia, 1907. Net $4.00.

Friedenwald and Ruhräh: "Diet in Health and Disease," W. B. Saunders & Co., Philadelphia. 2d Ed. Net $4.00.

Hutchinson, R.: "Food and Dietetics," Wm. Wood & Co., New York. Net $3.00.

Lusk, G.: "Elements of Nutrition," W. B. Saunders & Co., Philadelphia, 1906. Net $2.50.

Thompson: "Practical Dietetics," D. Appleton & Co., New York, Sub. Net $5.00.

Sections on diet in works on therapeutics may also be consulted.

IMMUNIZATION OF CHILD BEFORE BIRTH

To the Editor:—Four or five years ago I was called to attend a negro woman in confinement. Nothing was said about any members of the family having smallpox, but on my arrival I found five of the children in various stages of the disease and the mother with confluent smallpox. After the birth of the baby it was left in the same bed, nursed whenever it wanted to, and was exposed in every conceivable way to the contagion. It was not vaccinated, and there was never even a pimple on it. The mother was in the ninth day of eruption, and though her life was despaired of, she made a good recovery. The baby was evidently immunized, through the mother's blood, prior to birth.

D. L. WILKINSON, Montevallo, Ala.

DRUGS WHICH CAUSE SUBNORMAL TEMPERATURE TO RISE

To the Editor:—Do you know of any (ponderable) drugs that cause temperature to rise when subnormal? If so, which?

M. S. A.

ANSWER.—Drugs which increase oxidation may cause a rise of temperature to the normal, but above this point physiologic heat regulations would compensate for the increased heat production unless some cause of fever were present. Atropin in moderate doses raises the temperature. Strychnin, caffein, digitalis, and iodothyrin produce a similar effect.

ACTION OF ACIDS ON CALOMEL, WHEN TAKEN INTERNALLY

To the Editor:—Why are articles containing acids withheld after administration of calomel? A. M.

ANSWER.—It is generally supposed that the calomel will be changed into corrosive sublimate under the action of acids. This opinion, however, appears not to rest on any good chemical ground, since the tendency to the formation of corrosive sublimate from calomel when under the action of strong acid at the temperature of the body is practically *nil*, with the exception of oxidizing acids, such as nitric, nitrohydrochloric and hypochlorous.

MEAT OF TUBERCULOUS COWS

To the Editor:—In Massachusetts the flesh of cows, condemned on account of tuberculosis, is allowed to be sold after slaughter provided that the tuberculosis is not generalized; It is claimed that such meat will not transmit the disease. The state authorities submit the meat to inspection by the federal authorities and sell what is not rejected after inspection. W. P. COUES, Boston.

ANSWER.—It is generally admitted, we believe, that there is little danger from the flesh of cattle with slight localized tuberculosis, since the danger which exists would be removed by thorough cooking. While it seems proper that such meat might be sold, it is only fair to the consumer that he should know that the meat is that of an animal that has been condemned for tuberculosis.

DATA WANTED ON ATROPIN AS A HEMOSTATIC

To the Editor:—I am collecting material for a paper on atropin as a hemostatic and would be obliged to any of your readers who would send me notes of their experience with this remedy. I am particularly anxious to receive adverse reports, as well as those favoring the remedy. WILLIAM F. WAUGH.

1424 East Ravenswood Park, Chicago.

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending March 6, 1909:

Morris, E. R., major, having been found physically disqualified, retired from active service as a lieut.-colonel, Feb. 26, 1909.

Quinton, W. W., capt., having been found physically disqualified, ordered to his home to await retirement.

Thomason, H. D., capt., granted an extension of 10 days to his leave of absence.

Bartlett, C. J., capt., granted leave of absence for 10 days.

Hanson, L. H., lieut., relieved from duty at Fort Sam Houston, Texas, and ordered to Hot Springs, Ark., for duty at the Army and Navy General Hospital.

Mount, J. R., M. R. C., granted leave of absence for one month, with permission to apply for an extension of one month.

Hadra, F., M. R. C., honorably discharged from the service of the United States.

Patterson, E. W., M. R. C., granted leave of absence for one month.

Dade, W. H., M. R. C., sailing for Philippine service deferred to April 5, 1909.

Griswold, W. C., M. R. C., granted leave of absence for 3 months 15 days.

Navy Changes

Changes in the Medical Corps, U. S. Navy, for the week ending March 6, 1909:

Richardson, R. R., P. A. surg., detached from the *Albany* and ordered home to wait orders.

Stibbens, F. H., asst.-surg., detached from the Naval Hospital, Mare Island, Cal., and ordered to the *Albany*.

Ohnesorg, K., surg., detached from the *New Hampshire* and ordered to the Naval Medical School Hospital, Washington, D. C.

Rennie, W. H., P. A. surg., detached from the *Kentucky* and ordered to the *Illinois*.

Oman, C. M., P. A. surg., detached from the *Illinois* and ordered to the *New Hampshire*.

Public Health and Marine-Hospital Service

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine-Hospital Service for the seven days ended March 3, 1909.

McClintic, Thomas B., P. A. surg., relieved from duty in Philippine Islands and directed to return to the United States.

Korn, W. A., P. A. surg., granted one month's leave of absence from March 18, 1909, with permission to go beyond the seas.

Branham, H. M., acting asst.-surg., granted thirty days' leave of absence from Feb. 23, 1909.

Bullard, John T., acting asst.-surg., granted thirty days' leave of absence from March 1, 1909.

Yakins, O. M., acting asst.-surg., granted three months' leave of absence from Jan. 21, 1909, without pay.

Goldthwaite, Henry, acting asst.-surg., granted five days' leave of absence from March 8, 1909.

Parker, Thomas F., acting asst.-surg., granted six months' leave of absence from April 1, 1909, without pay.

Townsend, F., acting asst.-surg., granted fourteen days' leave of absence from Feb. 23, 1909.

Ward, J. LaBruce, acting asst.-surg., granted five days' leave of absence from March 3, 1909.

PROMOTIONS

Nydegger, James A., P. A. surg., commissioned a surgeon, to rank as such from Feb. 4, 1909.

McKeon, Francis H., asst.-surg., commissioned a P. A. surgeon, to rank as such from Nov. 27, 1908.

Pettyjohn, Joseph, asst.-surg., commissioned a P. A. surgeon, to rank as such from Oct. 20, 1908.

Frost, Wade H., asst.-surg., commissioned a P. A. surgeon, to rank as such from Feb. 3, 1909.

Mullan, Eugene H., asst.-surg., commissioned a P. A. surgeon, to rank as such from Feb. 2, 1909.

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended March 5, 1909:

SMALLPOX—UNITED STATES

California: Los Angeles, Feb. 6-13, 3 cases.
District of Columbia: Washington, Feb. 13-20, 1 case.
Georgia: Cobb county, Jan. 16-Feb. 7, 8 cases; Paulding county, 15 cases.
Illinois: Danville, Feb. 14-21, 1 case; Galesburg, Feb. 13-20, 1 case.
Indiana: Elkhart, Feb. 13-20, 1 case; Evansville, 4 cases.
Kansas: Kansas City, Feb. 13-20, 6 cases; Topeka, 9 cases; Wichita, 1 case.
Kentucky: Covington, Feb. 13-20, 1 case; Lexington, 3 cases; Paducah, Jan. 16-20, 25 cases.
Louisiana: New Orleans, Feb. 13-20, 4 cases.
Michigan: Grand Rapids, Feb. 13-20, 1 case; Saginaw, Jan. 30-Feb. 6, 1 case; Feb. 13-20, 2 cases.
Minnesota: Minneapolis, Jan. 1-31, 22 cases.
Missouri: Kansas City, Feb. 13-20, 1 case; St. Louis, 1 case.
Montana: Butte, Feb. 2-16, 5 cases.
Nebraska: Lincoln, Jan. 1-30, 2 cases.
North Carolina: Wilmington, Mar. 1, 3 cases.
Ohio: Cincinnati, Feb. 12-19, 16 cases; Dayton, Feb. 13-20, 1 case.
Tennessee: Memphis, Jan. 30-Feb. 13, 55 cases; Nashville, Feb. 13-20, 6 cases.
Texas: El Paso, Feb. 9-23, 3 cases; San Antonio, Jan. 24-31, 15 cases.
Washington: Spokane, Feb. 16-13, 1 case, imported.
Wisconsin: La Crosse, Feb. 13-20, 7 cases; Manitowoc, 1 case.

SMALLPOX—FOREIGN

Brazil: Bahia, Jan. 2-16, 43 cases, 2 deaths.
British Honduras: Stann Creek, Feb. 5-11, 1 case, imported.
Canada: Halifax, Feb. 6-13, 22 cases.
Chile: Talcaguano, Jan. 23-30, present.
Egypt: Cairo, Jan. 14-21, 62 cases, 18 deaths.
France: Marseilles, Jan. 1-31, 1 death.
Great Britain: Bristol, Jan. 30-Feb. 6, 7 cases; London, 1 case.
India: Bombay, Jan. 19-26, 10 deaths; Calcutta, Jan. 9-16, 117 cases, epidemic; Madras, Jan. 16-22, 1 death.
Indo-China: Saigon, Jan. 2-9, 2 cases, 1 death.
Italy: General, Jan. 31-Feb. 7, 9 cases; Naples, Jan. 31-Feb. 7, 25 cases, 5 deaths.
Japan: Formosa, Jan. 9-16, 1 case.
Batavia: Java, Jan. 2-9, 4 cases, 1 death.
Manchuria: Dalny, Jan. 16-23, 1 case.
Mexico: Acapulco, Jan. 18-24, 4 deaths; Guadalajara, Feb. 6-11, 2 deaths; Mexico City, Dec. 26-Jan. 2, 24 deaths; Monterey, Feb. 7-14, 1 death.
New Foundland: South Coast, Jan. 13, present.
Norway: Bergen, Jan. 23-30, 2 deaths.
Peru: Lima, Jan. 21, 5 cases, in lazaretto.
Russia: Moscow, Jan. 23-30, 19 cases, 10 deaths; Odessa, Jan. 16-23, 3 cases; St. Petersburg, 9 cases, 2 deaths.
Salvador: San Salvador, to Feb. 6, 3 cases; Santa Ana, 40 cases.
Spain: Madrid, Jan. 1-31, 14 deaths; Valencia, Jan. 23-30, 3 cases.
Turkey: Constantinople, Jan. 24-Feb. 7, 4 deaths.

YELLOW FEVER

Brazil: Bahia, Jan. 2-16, 32 cases, 8 deaths; Para, Jan. 16-30, 4 deaths.
Dutch Guiana: Paramaribo, Jan. 1-31, 11 cases, 1 death.
Ecuador: Guayaquil, Jan. 23-30, 2 deaths.
West Indies: Curacao, Jan. 8-15, 1 case.

CHOLERA

India: Bombay, Jan. 19-26, 4 deaths; Calcutta, 16 deaths; Rangoon, 1 death.
Russia: General, Jan. 9-16, 217 cases, 59 deaths; St. Petersburg, Jan. 16-23, 273 cases, 114 deaths.

PLAGUE

Brazil: Bahia, Jan. 2-9, 2 cases, 1 death; Para, Jan. 23-30, 1 case, 1 death.
Chile: Iquique, Jan. 26, 9, in lazaretto.
Ecuador: Guayaquil, Jan. 23-30, 4 deaths.
Egypt: General, Jan. 21-28, 6 cases, 2 deaths; Alexandria, 1 case.
India: Bombay, Jan. 19-26, 16 deaths; Calcutta, Jan. 9-16, 18 deaths; Rangoon, 8 deaths.
Japan: Formosa, Jan. 9-23, 21 cases, 49 deaths.
Mauritius: Nov. 1-30, 43 deaths.
Peru: General, Jan. 23-30, 57 cases, 24 deaths; Callao, 7 cases, 5 deaths; Lima, 4 cases, 3 deaths.
Turkey: Bagdad, Jan. 9-16, 5 cases, 2 deaths.

Association News

Announcement of Arrangements Under Way For Transportation to Atlantic City Session

The Committee on Transportation and Place of Session announces that negotiations are in progress for special rates on all railroads to the Sixtieth Annual Session of the American Medical Association, which is to be held in Atlantic City, New Jersey, June 8 to 11, 1909.

The negotiations include provisions for such special trains or cars as may be necessary from all parts of the country.

Those who contemplate attending the session are therefore requested not to make reservations or promises until the report of the committee is published, which will be in the near future.

M. L. HARRIS, Chairman,
Committee on Transportation and Place of Session.

NEW MEMBERS

List of new members of the American Medical Association for the month of February, 1909:

ALABAMA

Baldwin, B. J., Montgomery.
Etheredge, B. T., Town Creek.
Goldthwaite, Robt., Montgomery.
Hairston, W. G., Burnt Corn.
Harrell, W. B., Cates.
Huddleston, R. L., Speigners.
Jones, J. R., Camden.
Langley, W. T., Camp Hill.
McMurphy, J. P., Atmore.
Northen, Thos., Ashland.
Sherrill, R. B., Hartselle.
Solomon, E. P., Birmingham.

ARIZONA

Perkey, A. B., Morenci.
Redewill, F. H., Phoenix.
Servin, G. R., Tucson.

ARKANSAS

Altman, G. G., Helena.
Foster, Marion E., Roseville.
Garrison, C. W., Ft. Smith.
McCarroll, H. R., Walnut Ridge.
Robertson, A. B., Calmer.
Robertson, J. A., Hot Springs.
Ruff, Horace E., Pitman.
Rushing, J. L., Chidester.

CALIFORNIA

Edmonds, F. W., Berkeley.
Goldman, S. A., Orland.
Hart, A. C., Sacramento.
Higgins, I. W., Berkeley.
Johnston, J. H., Dutch Flat.
Rothganger, George, San Francisco.
Shannon, J. W., San Diego.
Stafford, D. E., San Francisco.
Wintermute, G. P., Oakland.

COLORADO

Campbell, Jacob, Boulder.
Dale, J. E., Fort Collins.
McKelvey, S. R., Denver.
Milligan, C. F., Vilas.
Mornings, J. F., Denver.
Pitts, W. I., Bristol.
Witter, R. V., Fountain.

CONNECTICUT

Coburn, J. M., So. Norwalk.
McNeil, Rollin, New Haven.
Phillips, F. L., Litchfield.
Ruickoldt, F. A., New Haven.

DISTRICT OF COLUMBIA

Fisher, R. A., Washington.
Kaveny, J. J., Washington.
Lewis, S. E., Washington.
Price, M. H., Washington.
Vale, F. P., Washington.

GEORGIA

Little, A. G., Valdosta.
Sample, R. L., Statesboro.

ILLINOIS

Becker, P. F., Chicago.
Bremerman, L. W., Chicago.
Carey, J. F., Braceville.
Crofut, Martha M., Maywood.
Doulon, S. E., Chicago.
Dunzer, Sophie C., Chicago.
Jampolis, Mark, Chicago.
Kenton, J. R., Raymond.
McMillin, H. C., Morton.
Mueller, A. N., Rock Island.
Schmidt, F. E., Chicago.
Peterson, E. F., Varna.

INDIANA

Boyd, H. B., Cambridge City.
Eckhart, G. G., Marion.
Holloway, Emma G., North Manchester.
Hulbush, W. A., Ft. Wayne.
McCown, P. E., Indianapolis.
Bodenbeck, Frank, Arcadia.
Saunders, J. E., Balbec.
Schuck, J. H., Chandler.
Souder, U. G., Auburn.
Walters, L. O., Chrisney.
Wilson, T. W., New Harmony.
Young, F. J., Leesburg.

IOWA

Beam, H. A., Bradgate.
Bice, D. C., Des Moines.
Carhart, W. G., Marion.
Coakley, G. C., Creston.
Cowan, Isabel E., Rodney.
Foedyce, W. E., Oelwein.
Henry, Rex V., Hedrick.
Hess, W. C., Cresco.
James, L. D., Fairfield.
Meents, D. J., West Point.
Murphy, J. J., Cedar Rapids.
Parker, E. S., Ida Grove.
Sells, B. B., Independence.
Somers, Pearl E., Grinnell.
Van Derveer, F. L., Cedar Falls.
Ware, W. F., Mount.

KANSAS

Haynes, E. E., Lewis.
Heylman, H. H., Hutchinson.
Jones, W. M., Hutchinson.
Pearson, P. A., Kinsley.
Scott, T. P., Topeka.
Smith, E. O., Marquette.

KENTUCKY

Combs, J. W., Daisy.
Doole, T. P., Louisville.
McKinley, D. H., Winchester.
Pendley, J. W., Paducah.
Shively, O. H., Greensburg.
Spaulding, J. R., Lebanon.
Taylor, J. H., Providence.
Weinberg, S., Louisville.
Young, L. E., Paducah.

LOUISIANA

Cohn, Isadore, New Orleans.
Estopinal, J. A., New Orleans.
Landry, J. E., New Orleans.
Perkins, A. J., Lake Charles.
Sistrunk, W. E., Lake Charles.

MAINE

Tyson, F. C., Bangor.

MARYLAND

Bergland, J. M., Baltimore.
Blake, H. C., Baltimore.
Carroll, A. H., Baltimore.
Fenby, E. B., Baltimore.
Henderson, F. N., Rockville.
Herrmann, F. H., Baltimore.
Lumpkin, J. C., Baltimore.
McDevitt, E. P., Baltimore.
Sterling, E. B., Baltimore.
Wanstall, Alfred, Baltimore.

MASSACHUSETTS

King, N. C., Brockton.
Still, C. W., Roxbury.
Stoodley, H. M., Somerville.

MICHIGAN
Ardiel, L. M., Avoca.
Culver, B. W., Coldwater.
McNaughton, D. D., Argyle.
Millis, E. D., Webberville.
Raymale, G. P., Harbor Beach.
Stewart, F. W., Coldwater.
Turner, S. R., Bronson.
Wood, D. H., Coldwater.
Young, G. F., South Haven.

MINNESOTA
Andrews, R. N., Mankato.
Barclay, Alexander, Cloquet.
Brubaker, E. E., Northfield.
Friesleben, William, Sauk Rapids.
Salter, W. H., Duluth.
Smith, A. E., Minneapolis.

MISSISSIPPI
Wait, H. C., Etta.

MISSOURI
Bassett, S. T., St. Louis.
Glennon, W. P., St. Louis.
Kern, J. H., St. Louis.
Lee, Herbert, St. Joseph.
Lund, H. G., St. Louis.
Schery, C. W., St. Louis.
Woodruff, F. E., St. Louis.

NEBRASKA
Anderson, D. F., Edgar.

NEW HAMPSHIRE
Crossman, E. O., Portsmouth.
Fowler, F. A., Hill.

NEW JERSEY
Clock, R. O., Burlington.
Martine, F. L., Newark.
Miningham, W. D., Newark.
Nay, C. L., Jersey City.
Porteous, E. J., Atlantic City.

NEW YORK
Alexander, L. D., Jr., New York.
Antonius, Emma H. H., Brooklyn.
Barker, P. M., New York.
Beach, R. M., Brooklyn.
Block, Siegfried, Brooklyn.
Brader, W. B., Brooklyn.
Burns, Robt., Syracuse.
Chace, A. E., Tarrytown.
Cole, C. G., Binghamton.
Cone, R. S., Brooklyn.
Cohn, Wm., New York.
Craig, T. L., Davenport.
Demong, C. W., Syracuse.
Devlin, R. J., New York.
Durham, Roger, Brooklyn.
Fries, Wm. A., Brooklyn.
Goss, Alfred, Adams.
Green, E. E., Brooklyn.
Hacker, C. G., Albany.
Hacker, C. W. L., Albany.
Hall, W. P., Frankfort.
Harmar, J. A., New York.
Harrig, P. W., Albany.
Harris, H. G., New York.
Hincher, C. L., Rochester.
Horner, R. N. W. R., Watkins.
Howser, F. P., Ortleville.
Hull, E. T., New York.
Hulst, F. A., Brooklyn.
Hussey, A. A., Brooklyn.
Isaacs, H. E., New York.
Jenkins, J. A., Brooklyn.
Kallsher, Joseph, New York.
Kilbourn, J. G., Utica.
Killip, T. A., Rochester.
Kimball, F. W., New York.
Lane, C. E., Poughkeepsie.
Lawler, A. J., Niagara Falls.
MacRae, Thos., New York.
McGuire, E. R., Buffalo.
McMenamen, F. J., Highland Falls.
Meyer, Joseph, Brooklyn.
Mittendorf, A. D., New York.
Murphy, E. J., Brooklyn.
Newell, E. S., Pelham.
Noonan, C. J., Brooklyn.
Ochs, B. F., New York.
Ormiston, Wm., Delhi.
Rae, J. B., New York.
Rannold, J. C., Brooklyn.
Rehberger, C. E., Sonyea.
Robinsohn, David, New York.
Roper, J. C., New York.
Schmitt, A. E., Riverdale-on-Hudson.
Schoen, Adolph, New York.
Simmons, W. S., Jr., Brooklyn.
Spence, D. B., New York.
Spiller, W. H., New York.
Stafford, A. E., Whitesboro.
Sweetland, Frank, Angola.
Thompson, E. B., New York.
Van Campen, Benj., Olean.
Waechter, A. L., New York.
Ward, E. H. P., New York.
Ward, Wilbur, New York.
Warner, C. B., Port Henry.
Weil, Richard, New York.
Wenner, George, New York.
Wilkinson, E. C., New York.

NORTH CAROLINA
Foscue, J. E., Jamestown.
Frazer, Thompson, Asheville.

NORTH DAKOTA
Hattendorf, Jessie, Jamestown.
Lyman, F. V., Thompson.
Sandven, N. O., Park River.

OHIO
Childs, L. W., Cleveland.
Kinnicutt, W. H., Cleveland.
Rieg, P. S., Toledo.
Swinehart, M. E., Lockbourne.
Thompson, J. D., Granville.
Tuechter, J. L., Cincinnati.

OKLAHOMA
Cavett, E. R., Kiel.
Croston, G. C., Sapulpa.
Rammel, W. E., Bartlesville.
Runyan, J. R., Ada.

OREGON
Baker, J. A., Gaston.
Clay, H. E., Salem.
Coghlan, J. N., Portland.

PENNSYLVANIA
Baaleth, G. R., Pittsburg.
Brinham, A. W., Scalp Level.
Brophy, J. A., Philadelphia.
Carruthers, G. H., Philadelphia.
Ferguson, W. N., Philadelphia.
Frankel, J., Philadelphia.
Hildrip, J. W., Philadelphia.
Holliday, G. A., Pittsburg.
Johnston, R. C., Springdale.
Leidy, C. F. M., Philadelphia.
McKinley, A. L., Philadelphia.
McLernon, John, Philadelphia.
Miller, D. L., Harrisburg.
Milligan, S. C., Pittsburg.
Parks, O. C., Pittsburg.
Reppiher, S. J., Philadelphia.
Richards, D. B., Philadelphia.
Schetky, S. Elizabeth A., Philadelphia.
Simpson, J. R., Pittsburg.
Smith, J. D., Freedom.
Stout, E. J., Philadelphia.
Target, J. D., Philadelphia.
Tillman, W. G., Easton.
Walker, J. T., Philadelphia.
Yeager, F. N., Philadelphia.

RHODE ISLAND
Anderson, A. J., Newport.
Archambault, J. B., Woonsocket.

SOUTH CAROLINA
Valley, J. L., Pickens.

TENNESSEE
Abernathy, Shields, Pulaski.
Enochs, W. N., Huntingdon.
Henderson, P. L., Morristown.
Parker, W. B., Smithville.
Pettey, G. E., Memphis.

TEXAS
Alexander, C. E., Pollok.
Brannon, H. O., Ft. Worth.
Delany, G. E., Galveston.
Hartman, Henry, Galveston.
Heard, A. G., Galveston.
Hearn, R. E., Mabank.
Hicks, J. H., Josephine.
Hume, Lea, Eagle Pass.
Kennedy, T. L., Galveston.
King, W. A., San Antonio.
Kleberg, Walter, Galveston.
McFarland, W., Eagle Pass.
Oxford, J. W., Austin.
Parker, G. D., Houston.
Pritchett, Ira E., Galveston.
Richmond, J. M., El Paso.
Ross, H. B., Del Rio.
Rumph, E. P., Lawn.
Scott, R. M., Del Rio.
Shipp, W. J., New Salem.
Shropshire, L. L., San Antonio.
Springer, J. G., San Antonio.
Tallaferro, W. F., Beaumont.
Thomson, W. F., Beaumont.
Warfield, Clarence, San Antonio.
Watson, Wm., Uvalde.
Williams, W. T., Beaumont.

UTAH
Merrill, H. G., Provo.

VIRGINIA
Baggarly, C. M., Richmond.
Busey, C. E., Lynchburg.
Meade, J. O., Fugates Hill.
Morrison, James, Lynchburg.
Stone, H. B., Charlottesville.
Walker, L. D., Spout Spring.
West, W. J., Richmond.

WASHINGTON
Black, F. A., Seattle.
Doland, C. M., Spokane.
Kuykendall, G. B., Pomeroy.
Morrison, J. R., Bellingham.
Rinkenberger, F. W., Tacoma.
Taggart, E. J., Bremerton.

WEST VIRGINIA
Davis, G. H., Chester.
Staatz, O. M., Wheeling.
Stahl, E. J., Charleston.
Warder, J. L., Weston.

WISCONSIN
Allen, C. F., Middleton.
Bickford, H. G., Hudson.
Kelthley, J. A., Palmyra.
O'Connell, D. C., Menasha.
Pope, F. W., Racine.
Ryan, C. E., Appleton, Wis.
Sorenson, Soren, Racine.
Westgate, F. J. E., Manitowoc.

WYOMING
Croft, E. W., Cowley.

Marriages

JOSEPH J. MAHADY, M.D., to Miss Nellie Nulty, both of Adams, Mass., recently.

EDMUND MYERS, M.D., Boston, to Miss Stella Hayman of Philadelphia, February 23.

ALBERT SUMNER BACON, M.D., to Miss Lottie Gilbert Tift, both of Albany, Ga., February 16.

F. J. FRESHLEY, M.D., Plainville, Ind., to Miss Bessie P. May of Newtonville, Ind., February 3.

LORNE A. CAMPBELL, M.D., Clear Lake, Wis., to Miss Letitia A. Lee of Grand Forks, N. D., January 1.

SADIE MONAHAN, M.D., Wellston, Ohio, and G. W. Whitt of Oklahoma City, at Dayton, Ohio, recently.

WILMER G. LOCKARD, M.D., New Castle, Colo., to Miss Harriette Winoms of Albany, Ill., February 10.

DANIEL L. MCCORMICK, M.D., Newark, N. J., to Miss Sarah A. Convery, of Trenton, N. J., February 17.

OLIVER CHAMBERS, M.D., Rock Springs, Wyo., to Miss Mabel Elizabeth Bosworth of Denver, Dec. 30, 1908.

BRENT C. TARBELL, M.D., Naco, Ariz., to Miss Ora E. Foree of Kansas City, Mo., at El Paso, Texas, February 23.

V. JOSEPH BLANCHETTE, M.D., Walkerville, Mich., to Miss Catherine A. Otterbein of Grand Rapids, Mich., February 22.

Deaths

Robert Alexander Murray, M.D. New York University, New York City, 1873; a member of the American Medical Association, American Gynecological Society and New York Academy of Medicine; fellow and ex-president of the New York Obstetrical Society; president of the New York Society of Medical Jurisprudence; formerly adjunct professor of obstetrics in New York University; obstetric surgeon to the Maternity Hospital, Blackwell's Island; surgeon to the Workhouse and Almshouse; consulting gynecologist to the French Hospital; and associate surgeon to the Woman's Hospital; died at his home in New York City, February 27, from pneumonia, aged 57.

Thomas Cameron Walton, M.D. New York University, New York City, 1862; who was appointed to the naval medical corps Oct. 5, 1861; served during the Civil War, and was retired at the age of 62 as medical director, May 31, 1900, after fourteen years and ten months of sea service, and twenty-one years and eleven months of shore and other duty, during which he was twice senior medical officer at the U. S. Naval Academy, Annapolis, and once fleet surgeon of the flying squadron; a member of the American Medical Association and of the French Society of Hygiene; died suddenly from cerebral hemorrhage, at his home in Annapolis, March 2, aged 70.

Leo J. Weinstein, M.D. Miami Medical College, Cincinnati, 1874; of Terre Haute, Ind.; a member of the Indiana State Medical Association, and formerly president of the Vigo County Medical Society; a gynecologist of local repute, founder of the Union Hospital; a member of the city and county councils for two terms; and secretary of the city and county boards of health; died in the Union Hospital, February 17, aged 60. The Vigo County Medical Society, at a special meeting, adopted resolutions paying tribute to his memory and extending sympathy to his bereaved family.

Edmund George Waters, M.D. University of Maryland, Baltimore, 1853; of Baltimore; some-time representative in the legislature from Dorchester county; from 1862-1865 acting

assistant surgeon U. S. Army; professor of natural science in the Baltimore City College from 1866 to 1868; one of the founders of the Medical and Surgical Society of Baltimore in 1863; and a founder and president of the Baltimore Medical Association; died February 19, in the Union Protestant Hospital, Baltimore, from nephritis, aged 78.

Samuel Johnson Call, M.D. Cooper Medical College, San Francisco, 1884; surgeon in the U. S. Revenue Cutter Service, serving chiefly in Arctic waters for many years; surgeon of the relief party which rescued the imprisoned whalers at Point Barrow, Alaska, in February, 1898, and voted a gold medal by Congress for this service; died at his home in Hollister, Cal., from nephritis, February 16, aged 51.

Chauncey Harmon Smith, M.D. Jefferson Medical College, Philadelphia, 1871; formerly a member of the American Medical Association and Austin Flint-Cedar Valley Medical Society; local surgeon for the Chicago, Milwaukee and St. Paul Railway; and a prominent practitioner of that section of Iowa; died at the home of his daughter in Mason City, February 25, aged 71.

Isaac R. Swigart, M.D. Cincinnati College of Medicine and Surgery, 1877; formerly of Laramie; secretary and editor of the Wyoming State Medical Society, and a member of the Rocky Mountain Inter-State Medical Society; assistant surgeon for the Colorado Fuel and Iron Company; died at his home in Leslie, Wyo., February 19, from locomotor ataxia, aged 61.

William Wilburn Lunn, M.D. Tulane University, New Orleans, 1884; formerly president of the Fayette County (Texas) Medical Association; chief surgeon of the Lunn Sanitarium, and the Texas Christian Sanitarium, Houston; died in the Lunn Sanitarium, February 24, from septicemia, due to an operation wound, aged 62.

Wilbur Hall Seymour, M.D. Long Island College Hospital, Brooklyn, 1892; assistant in pathology in his alma mater; pathologist to the Bushwick Hospital, and Sheltering Arms Nursery, and assistant pathologist to King's County and Long Island College hospitals; died at his home in Brooklyn, February 28, from pneumonia, aged 40.

James W. Moore, M.D. University of Pennsylvania, Philadelphia, 1869; a member of the Medical Society of the State of Pennsylvania; professor of mechanics and experimental philosophy in Lafayette College, Easton, since 1872; died at his home in that city, February 28, from septicemia due to an ulcerated tooth, aged 64.

Henry J. Brooks, M.D. Northwestern University, Chicago, 1874; Long Island Hospital College, Brooklyn, 1874; from 1874 to 1877 assistant physician, and from 1890 to 1893 superintendent of the Illinois Northern Hospital for the Insane, Elgin; died at his home in Dixon, February 25, from cerebral hemorrhage, aged 59.

Frank Jackson MacNett, M.D. Bellevue Hospital Medical College, New York City, 1898; a member of the American Medical Association; a specialist on diseases of the eye, ear, nose and throat, and a special pension examining surgeon, died at his home in Traverse City, Mich., February 28, from pneumonia, aged 37.

John H. W. G. Weedon, M.D. University of Maryland, Baltimore, 1864; of Church Hill, Md.; formerly a member of the Medical and Chirurgical Faculty of Maryland and a member of the legislature from Queen Anne county; died in the University Hospital, Baltimore, February 17, from nephritis, aged 74.

Isaac A. Thompson, M.D. Trinity Medical College, Toronto, 1883; of Grand Rapids; a member of the Michigan State Medical Society; formerly health officer of Traverse City, and local surgeon for the Grand Rapids and Indiana Railroad; died at St. Mary's Hospital, Grand Rapids, February 25, aged 49.

Charles Lince Coulter, M.D. University of the Victoria College, Coburg, Ont., 1869; formerly government inspector of medical supplies for the Dominion of Canada; and chief surgeon of the Grand Trunk Railroad; died at his home in Philadelphia, February 22, from pneumonia, aged 69.

Horatio Ripley Bigelow, M.D. George Washington University, Washington, D. C., 1879; formerly of Boston; who held at one time a government appointment at Berlin, and later was United States consul at Rouen, France; died at his home in Washington, February 20, aged 65.

John B. Bass, M.D. Washington University, Baltimore, 1870; a member of the American Medical Association and of the board of U. S. pensioning examining surgeons of St. Clair county, Ala.; a Confederate veteran; died at his home in Ashville, February 21, aged 64.

Joseph S. Maxon, M.D. Hahnemann Medical College, Chicago, 1875; Chicago Homeopathic Medical College, 1879; a member of the Wisconsin legislature in 1890 and 1891; coroner of McHenry county, Ill.; died at his home in Harvard, February 28, from influenza, aged 70.

Harry C. Long, M.D. Western Reserve University, Cleveland, 1891; for many years house physician of hotels in Cleveland; and for the last nine years physician at the Hollenden; died in the Flagler Hospital, St. Augustine, Fla., February 23, from nephritis, aged 40.

Ah Sam Lang (license, Kan., 1901); of Leavenworth, Kan.; said to have been a graduate of a medical college in Canton, China, in 1882; died in St. John's Hospital, Leavenworth, February 18, from the effects of poisoning by cannabis indica and gas.

Edwin D. Wiley, M.D. Bennett Medical College, Chicago, 1870; of Des Moines, Iowa; a member of the American Medical Association; died suddenly while making a professional call in South Des Moines, February 28, from heart disease, aged 52.

Daniel E. Barger, M.D. New York University, New York City, 1877; formerly health officer of San Francisco; and later superintendent of the City and County Hospital; a Confederate veteran; died recently and was buried February 18, aged 72.

William J. Ballentine, M.D. Medical College of South Carolina, Charleston, 1857; formerly of Brewerton and Princeton, S. C.; a Confederate veteran; died at the home of his son in Ware Shoals, S. C., February 14, from senile debility, aged 80.

Ambrose Brown, M.D. Ohio Wesleyan University, Cleveland, 1865; for many years a practitioner of Grand Ledge, Mich.; a veteran of the Civil War; died at his home in Lansing, Mich., February 24, from cardiac dropsy, aged 68.

William F. Chenault, M.D. University of Maryland, Baltimore, 1888; a member of the Medical Society of the State of North Carolina; died at his home in Cleveland, N. C., February 24, from cerebral hemorrhage, aged 46.

James F. Grimes (license, Ind., 1897); for fifty-six years a practitioner of northern Indiana; the oldest member of the Physicians' Club of Mishawaka, Ind.; died at the home of his daughter in that place, February 26, aged 85.

Jesse Reynolds, M.D. Castleton (Vt.) Medical College, 1847; formerly a member of the American Medical Association; a trustee of the Normal school board; died at his home in Potsdam, N. Y., February 19, aged 85.

Hubbard Hammond Brigham, M.D. Worcester (Mass.) Medical College, 1855; the oldest practitioner of Fitchburg, Mass.; died at the home of his son in Brigham Park, Fitchburg, February 20, from senile debility, aged 91.

Hebron D. Kelly, M.D. Medical College of the State of South Carolina, Charleston, 1895; a member of the Medical Association of the State of Alabama; died at his home in Bellwood, February 23, aged 38.

Virgil H. Grimsley, M.D. Memphis (Tenn.) Hospital Medical College, 1895; of the Mount Carmel neighborhood, near Covington, Tenn.; died in a hospital in Nashville, February 18, from pneumonia, aged about 35.

Marshall Surenson, M.D. Rush Medical College, Chicago, 1894; of Viroqua, Wis.; a member of the State Medical Society of Wisconsin; died in La Crosse, Dec. 25, 1908, from appendicitis, aged 35.

John Dabney Palmer, M.D. University of Louisville, Ky., 1866; for many years president of the Florida State Board of Pharmacy; died at his home in Monticello, February 21, from pneumonia, aged 68.

Wesley McGuffin, M.D. Western University, London, Ont., 1892; of Battle Creek, Mich.; a member of the Michigan State Medical Society; died in Phoenix, Ariz., March 1, from tuberculosis, aged 42.

William Nisbet, M.D. University of Würzburg, Germany, 1849; a charter member of the Livingston County (N. Y.) Medical Association; died at his home in Avon, February 26, aged 83.

George Frechette, M.D. Laval University, Quebec, 1877; a member of the medical staff of Notre Dame Hospital, Manchester, N. H.; died in that institution February 18, aged 59.

Charles I. Farley, M.D. University of Vermont, Burlington, 1859; assistant surgeon in the army during the Civil War; died at his home in Glens Falls, N. Y., February 22, aged 77.

Cotton C. Bradbury (license, Colo., 1882); for more than fifty years a practitioner; founder of the town of Evans, Colo.; died at his home in Denver, February 17, aged 86.

Carl Nelson Brandt, M.D. College of Physicians and Surgeons, New York City, 1883; of Hot Springs, Va.; died in Tarrytown, N. Y., February 27, aged 46.

James Augustus Pratt, M.D. Barnes Medical College, St. Louis, 1893; died at his home in Brookfield, Mo., Dec. 17, 1908, from cirrhosis of the liver, aged 53.

John A. Schulte, M.D. Washington University, Baltimore, 1875; of East Baltimore; died at the home of his brother in Baltimore, February 20, aged 56.

Henry Miller Downing, M.D. University of Pennsylvania, Philadelphia, 1886; died at his home in Sugartown, Pa., from pneumonia, January 21, aged 47.

Theodore Vanhensen Law, M.D. University of the Victoria College, Coburg, Ont., 1872; died at his home in Dearborn, Mich., February 24, aged 66.

Jessie C. Dickerson, M.D. Cleveland Homeopathic Medical College, 1898; died at her home in Muskogee, Okla., March 2, from tuberculosis, aged 29.

Hugo Schaeffer, M.D. University of Tübingen, Germany, 1865; died suddenly from heart disease at his home in Belleville, Ill., February 22.

David L. Trowbridge (license, Ind., 1905); for forty-two years a practitioner of Indiana; died at his home in Muncie, February 22, aged 75.

William L. MacBeth, M.D. Physio-Eclectic Medical College, Cincinnati, 1878; died at his home in Galesburg, Mich., February 17, aged 67.

William F. G. Wilson, M.D. Apothecaries' Medical College, England, 1866; died at his home in Armathwaite, Tenn., February 14, aged 65.

Stepney Brown Hill, M.D. Leonard School of Medicine, Raleigh, N. C., 1888; died at his home in Lynchburg, Va., February 15, aged 50.

Benjamin F. Northrip (license, Mo., 1890); of Springfield, Mo.; died in Stoutland, Mo., February 15, from pneumonia, aged 54.

Austin S. Bronson, M.D. Detroit College of Medicine, 1869; died at his home in New Hampton, N. H., Dec. 30, 1908, aged 65.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Lodge Practice in England

The *British Medical Journal*, February 13, publishes, in its supplement, an extended report of a conference called by the Council of the Charity Organization Society between representatives of the "friendly societies" and members of the medical profession. Friendly societies in England are similar to the benevolent and fraternal organizations of this country. For many years past one of the chief advantages offered members of such societies has been medical attendance for themselves and members of their family, services being furnished by the "lodge doctor" or "society physician." Multiplication of societies, with resulting rivalry, competition among physicians for such appointments and the necessity of reducing society operating expenses to the lowest possible point have all combined to reduce the compensation paid for medical services by most of these societies to an absurdly small amount, to which, however, the present holders of the positions cling, knowing that if they resign other men stand ready to take their places. The abuses and injustices of the system have been growing and it was in hopes of reaching an equitable solution of the problem that the conference was held. Six members of the British Medical Association nominated by the council, on recommendation of the medico-political committee, as well as representatives of divisions of the association from different parts of England were present. Representatives of the English Order of Foresters, Odd Fellows and Hearts of Oak (the latter a fraternal organization having a large membership in England) were among those present from the friendly societies. The principal paper on the subject was by Dr. Thomas Pearse in which he reviewed a protracted experience in lodge practice, saying that after twenty years of discussion the question is still unsettled. He asked the representatives of friendly societies to consider seriously whether the complaints of medical men were justified and whether anything could be done to remedy them. The profession had no quarrel with friendly societies as such. The good work they had done was patent to all; neither did the profession object to friendly societies providing medical attendance for their members in time of sickness. It only demanded that arrangements for such medical attendance should be equitable. Physicians maintained that the methods used were neither fair nor reasonable. Reviewing the facts in the light of a large mass of statistics, he showed that in 1,641 clubs, 76.5 per cent. paid less than five shillings—$1.25—while 23.5 per cent. paid more than this amount per member, annually. For this sum, the physician must attend members who are ill and must also provide necessary drugs and surgical dressing. As to the amount of work done, the annual reports of the Manchester Unity of Odd Fellows, comprising over 600,000 members, engaged in all varieties of occupation, showed that in the five years from 1893 to 1897 there had been an annual average period of sickness per member of 2.344 weeks. Consequently, a lodge of 100 members, about an average number, would experience during each year 234 weeks of sickness, for attendance on which the society physician would receive £25, or about $125. This would be equivalent to attending one man continuously for 234 weeks, or four years and six and a half months for $125. This amounts to about fifty-three cents a week, or on the basis of one call daily to about seven and a half cents a call, including cost of surgical dressing, etc. These figures are particularly interesting in view of the argument frequently made by lodges that the physician receives so much *per capita* from the well member as well as from the sick one and consequently can afford to attend those who are ill at a very low *per capita* rate. Dr. Pearse concludes that such remuneration is utterly unjust to a man who has spent years and means in obtaining the knowledge necessary to a performance of his work and that it is not likely to encourage him to discharge such duties efficiently and earnestly. Dr. Pearse also pointed out that the amount of the payment made by members to the fraternal societies for sick benefits has been very accurately determined, after long and careful actuarial investigation and calculation, while no such attempt has ever been made to determine the proper basis for compensation for physicians, the result being that compensation for medical services is purely guesswork rather than scientific calculation.

Another injustice is that members joining a fraternal organization in early life and when their income is limited to their wages, often becoming well-to-do in later life and abundantly able to pay the usual fees for medical services but that by maintaining their membership they are able to secure medical services at a rate entirely out of proportion to their ability to pay. An illustration of this point which he cites is a case reported in the *Lancet*, of the principal manufacturer of a certain district who paid his employés $3,000 a week in wages, who was wealthy enough to keep a stable of horses for hunting, and who, on his death, left over $50,000, and yet was attended in his last illness by a lodge doctor who received only four shillings a year for his services to this man. Another member attended by the society physician at the same rate left on his death over $400,000. Dr. Pearse held that a wage limit should be instituted in fraternal organizations and that no member earning or receiving an income over a certain amount should be entitled to the services of the lodge physician. He said that the problem was too difficult for one man to solve, that it should be approached in the light of reasonable endeavor and an honest effort made to arrive at a mutually satisfactory agreement. The real interests of

the medical profession and of the friendly societies were identical. Unless some radical improvement took place, however, self-respecting physicians would be compelled to refuse to have anything to do with fraternal organizations, which bodies would, in consequence, be restricted in their choice of physicians to incompetent or poorly trained men with a resulting reduction of the value of the services rendered their members. Not only are the present conditions unendurable from a financial point of view but many a man who began his work with enthusiasm has found his professional life embittered by the evils of the contract system which blighted his hopes, blighted his ambitions and destroyed his love of work.

Sir James Barlow, after discussing the large amount of unremunerated charitable work done by physicians and pointing out the injustice of the present situation, said that one of the most striking things that had happened in this generation was the improvement in the status of the working man. It is now admitted that a man who does his work deserves to have a living wage so as to be able to maintain himself and his family decently, to bring them up properly, and to get some little compensation for old age. He appealed to the representatives of the benevolent organizations to consider the work and remuneration of the physician from this point of view. A physician who did his work well deserved a living income so as to be able to bring up his family properly and educate them and also to put aside a little money for old age. He was also entitled to a little time for rest, quiet and leisure, as well as to an opportunity to keep himself abreast of the advance in medicine and surgery so that his patrons, whether they be individual or societies, could have the advantage of it. Could a medical man earn a living wage if he did nothing but club work? Was it possible for him to make a living and have any leisure? After reviewing the constant demands of a physician's life, he asked the representatives of the fraternal societies to consider the condition of the average physician, the number of hours a day which he worked, the amount of time for rest and recreation and leisure which he had and the compensation which he received. All were agreed that a friendly society was a good thing; that the principle of insurance was a good thing, and that it was the only way in which people with limited means could pay for their medical attendance.

The representatives of the friendly societies presented the matter from their point of view, maintaining that the inequity referred to was not general, but only occasional, and that in the main the treatment accorded physicians was fair. None of the representatives of fraternal societies who spoke presented any figures or data regarding number of cases or duration of illness by which their claims could be substantiated. Dr. Smith Whittaker, medical secretary of the British Medical Association, discussed previous attempts at solving this problem and said that the difficulty in the past had been that the medical profession was not sufficiently organized for any representatives to negotiate an agreement with the same authority which the friendly societies could negotiate. There were grievances on both sides but what the medical men felt most strongly was that a form of contract between the practitioner and his patients originally, enacted for a particular class and accepted by the physician for reasons applicable only to that class, had been greatly extended to people of other classes. The medical profession held that an agreement with the friendly society was a free contract and that physicians had a right to say what people they were willing to attend under such a contract. Physicians only desired pay for work that was actually done but they did desire adequate compensation for work which was properly performed. One speaker had suggested that the practice of medicine should become a state service. The question arose whether the medical profession was not at present being depleted by the large number of men of scientific tastes who were going into other lines of work. In some districts this was becoming a very serious question, since physicians were getting so discontented that men of good standing could not be obtained to supply the demand.

The above is a brief summary of a discussion covering many pages and of much interest as showing the economic and social conditions under which many members of the medical profession in Great Britain live. As previously pointed out in THE JOURNAL[1] this question is one of vital interest to American physicians. There is no reason why the physician should be exploited for the benefit of the middleman, whether that middleman is an individual or an organization. The ultimate outcome of lodge practice, as shown by this discussion, should be carefully considered by physicians in the United States. The physician, like any other professional man, should receive definite pay for definite services, rather than a fixed sum for an indefinite amount of work. American laboring men receive far better wages and live under better conditions than the English workingmen and can well afford to pay a reasonable price for competent medical services for themselves and their families. They should not ask or expect the physician to agree to work for them in violation of the very principles for which the workingman himself has contended for years. Any further development or spread of lodge or society practice in the United States should be vigorously opposed by county societies as well as by individual physicians.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Eighth Month—Second Weekly Meeting

DIFFUSE AND FOCAL DISEASES OF THE SPINAL CORD

HEMATORRHACHIS.—(a) Extra-meningeal, (b) intra-meningeal: due to traumatism, infections, convulsions, aneurism of base of brain, fracture of base, after meningitis. Symptomatology.

HEMATOMYELIA.—Etiology: Age, sex, trauma, exposure, convulsions, vascular degeneration, constitutional diseases. Pathology: Position in cord, vessels involved, extent, structures involved. Symptoms: Onset, paralyses, esthesiæ, pains, difference between two sides, course, terminations.

CAISSON DISEASES.—Etiology, pathologic findings, symptoms, treatment.

COMPRESSION MYELITIS.—Etiology: Spinal caries, tumors, aneurism, parasites, trauma. Symptoms: (1) Bone (vertebral) symptoms, deformity, tenderness, pain. (2) Nerve-root symptoms, intensity, pains, anesthesia, muscular atrophy, trophic changes. (3) Cord symptoms: (a) cervical, (b) dorsal, (c) lumbar.

LESIONS OF CAUDA EQUINA AND CONUS MEDULLARIS.—Etiology and diagnosis.

TUMORS OF CORD AND MEMBRANES.—Situation, extra- or intradural, level of cord. Tubercle, gumma, primary benign and malignant tumors, secondary invasion of extraspinal tumors. Symptoms: Radiating pains, segmental atrophy, paralysis, crossed sensory and paretic symptoms, slow progress of case. Differential diagnosis.

SYRINGOMYELIA.—Etiology and pathology: Age, sex, occupation, trauma: extent and site of cavity, structure of new growth. Symptoms: Pain, site and character; muscular atrophy, reflexes, paralyses, esthesiæ, trophic disorders. Diagnosis: Varying types.

ACUTE MYELITIS.—Etiology: Exposure, acute infectious, traumatism, disease of spine, disease of cord. Symptoms: (1) Acute diffuse myelitis; premonitory symptoms, onset, pain, constitutional disturbances, paralyses, esthesiæ, reflexes, sphincters, trophic disorders, course and terminations. (2) Acute transverse myelitis; (a) dorsal region, onset, pains, paralyses, esthesiæ, reflexes, sphincters, electrical changes, trophic changes, course. (b) Cervical region, difference in symptoms from dorsal, vomiting, bradycardia, hiccough, pupillary changes.

1. Jour. A. M. A., Dec. 14, 1907, p. 2028.

Book Notices

EXPERIMENTAL RESEARCHES ON SPECIFIC THERAPEUTICS. By Paul Ehrlich, M.D., D.Sc., Director of the königliches Institut für experimentelle Therapie, Frankfort. The Harben Lectures for 1907 of the Royal Institute of Public Health. Cloth. Pp. 95. Price, $1.00. New York: Paul B. Hoeber, 1909.

Perhaps the highest encomium that can be pronounced on the work of Ehrlich is that he has carried his deductions from the field of theory into that of practical results and seems to have approached very near to establishing principles of therapeutics which shall combat, not symptoms merely, but the cause of the disease and shall do this with the certainty of science rather than of empiricism. The lectures which form the present volume exhibit some of the outlines of this problem. The ideas of immunity based on the theory of "haptines," which are able to connect the invading organisms or their products with the cell products which are capable of neutralizing or destroying them, form the subject of the first lecture. These haptines, as Ehrlich shows, are not only active in attacking the bacteria or toxins themselves, but are also the agents which, by securing the attachment of opsonins and bacteriotropins, make phagocytosis possible. Ehrlich suggests that there are probably a number of specific haptines, the nature of which we do not know. The theory of the action of these bodies is forcibly set forth; and, while assent to such a theory must be given with the proviso that further investigation may considerably modify it, its acceptance at the present time undoubtedly affords a good working hypothesis. The second chapter is devoted to the consideration of a mode of immunity which has not been made so prominent in late discussions as the theory of toxins. This is called by Ehrlich "atrepsy," and he undertakes to explain the failure of certain bacteria as well as tumor cells to grow in the tissues of certain animals by supposing that the receptors by which they must appropriate nutriment have been atrophied so that they can no longer be made use of by the invading germ; hence the bacterium or tumor cell perishes for want of nutriment. In this way various instances of natural and acquired immunity may be explained. Whether this theory can be considered more than a working hypothesis is somewhat doubtful, but it is applied with considerable ingenuity and plausibility and its exposition will doubtless be read with great interest. The third and concluding chapter gives an account of Ehrlich's therapeutic studies on trypanosomiasis. The results of these very interesting and laborious researches have already been made known in other publications, but a review of them gives an encouraging outlook as to the possibilities of experimental therapeutics and the application of chemical synthesis to the construction of specific remedies. The polypharmacy of our fathers receives a late justification in the plan advocated by Ehrlich of attacking the enemy by several weapons at one time in order to secure a speedy victory. His view is that two or more remedies in non-poisonous doses may destroy an invading germ when the doses required of any one remedy would be poisonous for the host as well as the parasite.

The volume is small, neatly bound and contains as a frontispiece a portrait of the author.

NERVOUS AND MENTAL DISEASE MONOGRAPH SERIES No. 2. STUDIES IN PARANOIA. By Nikolaus Gierlich, Wiesbaden. Contributions to the Study of Paranoia. By M. Friedmann, Mannheim. Translated and Edited by Smith Ely Jelliffe, M.D. Paper. Pp. 78. New York: Journal of Nervous and Mental Disease Publishing Co., 1908.

The classification of mental diseases is both interesting and important to alienists and psychologists; yet even they are liable to be misled by the rigid systematization of cases. To the ordinary physician, however, the questions of etiology and prognosis in the individual case are more important. The conviction that paranoia is a fixed and incurable disorder is to a certain extent productive of unfortunate results. This conviction is likely to be shaken or removed by a perusal of the monographs of Gierlich and Friedmann.

Gierlich concerns himself with certain forms of periodic paranoia and paranoid delusions. He shows that many patients show a tendency to recovery, at least temporarily, with apparently perfectly normal intervals. It was possible to prevent the return of the attacks by suitable measures, or at least the severity of the attacks could be considerably lessened by guarding against weakening of the patient at certain seasons. If these precautionary measures were neglected the attacks returned in their typical form with striking similarity without evidence of progress in the system of delusion. The second and third attacks presented a less violent reaction than the original one. These cases can not be distinguished from those of paranoia at the time of the attack and are merely characterized by the absence of progression and by the mildness of the course. In reference to the question of the genesis of paranoia, whether it takes its origin in the emotions or is a purely intellectual disease, Gierlich takes a middle position. The foundation of delusion formations, in his opinion, consists in disturbances of the mental condition by violent protracted emotion, in combination with an existing weakness of judgment toward these highly accentuated ideas. The further course of the condition will depend essentially on the brain power, which determines whether or not the delusional interpretation will extend later on to ideas not accentuated in the sense considered or will disappear after the subsidence of the emotion.

Friedmann's contribution concerns certain mild forms of paranoia which prove to be more or less curable. The curability depends on causes at present not sufficiently understood, but one important fact has been learned, namely, that an endogenous paranoia is curable when the disease bears the character of a direct reaction to a definite external cause i. e., if the delusion formation shows no tendency to spread. On the other hand, the intellectual peculiarity which made the delusion formation possible may persist, for the patient is always confident of the truth of his delusions. The clinical picture, however, and the conduct of the patient depend on the condition of the affects. The cases discussed by Friedmann necessitate a modification of the definition of Kraepelin, who states that by paranoia is meant a disorder in which there is an insidious development of a permanent unshakable system of delusions, while, at the same time, the patient remains clear and there is no formal disorder of ideation. In the cases cited by Friedmann the development is not insidious, nor are the delusions permanent and unshakable, at least in the sense of remaining active.

Friedmann concludes that there are three forms of endogenous delusion formations: 1. The delusion formation, once started, progresses slowly but irresistibly, and the affect does not again become calmed down (genuine chronic paranoia). 2. The delusions remained confined to the conflict, but the delusions fade again and the affect disappears within a space of a few years. 3. We have nothing more than a clouding of judgment of a simple kind and ideas of reference are few, or entirely wanting, conditions, which for the most part run an episodic course.

THE RECTUM, Its Diseases and Developmental Defects. By Charles B. Ball, M.Ch., F.R.C.S.I., Hon. F.R.C.S., Regius Professor of Surgery in University of Dublin. Cloth. Pp. 332, with illustrations. Price, $10.50. New York: Oxford University Press.

The book is based on the Lane Lectures on Diseases of the Rectum delivered in San Francisco in 1902 and on the Erasmus Wilson Lectures on Adenoma and Adenocarcinoma of the Rectum delivered at the Royal College of Surgeons, England, in 1903. Chapter 1, dealing with the anatomy of the rectum and anus, deserves especial mention. The morphology and relations of the rectum and anal canal are given in a manner rare even in large special surgeries. The figures accompanying the text are clear. The chapter devoted to fistula is suggestive, and the classification of fistulas is more correct and self-explanatory than such classifications usually are. The operation performed by Professor Ball—that of suture after the connective tissue wall of the fistula has been thoroughly curetted away—has fallen into disuse in America, notwithstanding that it was devised by Dr. Stephen Smith and its efficacy fully demonstrated.

In the discussion of the pathology of hemorrhoids it might have been suggested that a number of competent investiga-

tors believe, after the histologic examination of many cases, that most hemorrhoids are angiomas.

In connection with the treatment of carcinoma one is pleased to see the care with which the preparation of the patient and the field of operation is insisted on. The efficacy of the antiseptics used in the preparation may be doubted, but one can not doubt the value of the mechanical actions of the solutions which are advised.

Ball's operation for removal of the rectum, which had been used in but one case at the time the book was published, seems to be on correct lines. We regret that the author has not given more of his personal experiences with the different methods of radical removal of the rectum for malignant diseases and the advantages and disadvantages of each.

In the chapter on colotomy no mention is made of the Maydl bridge or of Ward's stitch, which certainly have simplified the technic of this operation. Ball has apparently limited himself to the discussion of the operation which appeals most to him. A short but satisfactory paragraph is devoted to the after-treatment of colotomies.

The illustrations are good and the book is printed in large, clear type on good paper.

INFANTILISM FROM CHRONIC INTESTINAL INFECTION. By C. A. Herter, M.D., Professor of Pharmacology and Therapeutics, Columbia University. Cloth. Pp. 118. Price, $0.90. New York: Macmillan Co., 1908.

The fruitful results of the combination of clinical observation, chemical and bacteriologic research make this monograph an epoch-marking if not epoch-making work. The labors of the chemist and the bacteriologist in the study of the feces have long been of great interest from a scientific viewpoint, but gave little indication of leading to important practical results. But in this study of infantilism Dr. Herter has shown how they can be used to solve a problem in clinical medicine which otherwise would have long remained unsolved and which is of the greatest importance in the development of many individuals. The book shows also how much can be accomplished by the careful and persistent study of a few—in this instance five—cases. The patients were children whose growth was checked by intestinal digestive disorder. Dr. Herter notes an intolerance of carbohydrates and the study of fecal flora shows that the normal Gram-negative bacilli and cocci, have been replaced by Gram-positive bacilli, one of which, *B. infantilis*, is regarded as having an etiologic relation to the disease. There is a considerable loss of fat by the stool and this, together with the restriction of carbohydrates, causes a condition of undernutrition, which accounts for the lack of development of the tissues in general. The lessened absorption of fats has a further ill effect, by withdrawing calcium and magnesium in the form of soaps, so that, for lack of mineral constituents, the skeleton fails to develop. The condition is found to be a chronic one in which the bacilli have firmly established themselves by long habituation, having first become implanted during a case of acute or subacute gastroenteritis in early infancy. Dr. Herter's studies have led him to conclude that such patients can best be treated by regulation of the diet, in which the use of gelatin plays a most beneficent rôle.

The success of this chemico-bacteriologic study emphasizes the importance of thorough investigation of cases of chronic ill health and malnutrition in childhood. Routine physical examination and prescription of temporary remedies in such cases will do little good, and the physician who contents himself with such customary treatment is taking a short-sighted view of the case. He should realize that the future of his patient is in his hands, and depends on a thorough, patient investigation. This book shows that practical results from such an investigation are possible, and that the establishment of institutes where such investigations can be adequately carried on ought to be an achievement of the near future.

This book is destined to act as a powerful stimulus to similar work; and even to those physicians who are not so situated as to undertake original work on similar lines, it is fitted to give a conception of the possibilities of such investigation and to open vistas of the future progress of scientific medicine, that may be an efficient antidote to pessimistic and nihilistic views.

RETINITIS PIGMENTOSA: With an Analysis of Seventeen Cases occurring in Deaf Mutes. An Essay Awarded the Alvarenga Prize of the College of Physicians of Philadelphia, July, 1908. By William T. Shoemaker, M.D., Philadelphia. Laboratory Examinations of the Blood and Urine by John M. Swan, M.D., Philadelphia. Cloth. Pp. 106, with illustrations. Price $2. Philadelphia: J. B. Lippincott Co.

Dr. Shoemaker was awarded the Alvarenga prize of the College of Physicians of Philadelphia for this work, a fact which indicates its excellence from a scientific standpoint. The basis of the work was the study of seventeen carefully selected typical cases of retinitis pigmentosa occurring in deaf-mute children. The study begins with the history of the disease and its histology and pathology. Then follows the symptomatology and etiology, analysis and summary of the cases, laboratory findings, treatment, and then Dr. Shoemaker's conclusions, covering in all 106 pages. A bibliography and index are appended. There are three good colored plates of the fundus lesions, drawn by Dr. Mary Buchanan. The book is printed in large type on very good paper, not too highly finished, and therefore easy on the eyes.

SANITARY SCIENCE AND ALLIED SUBJECTS. Selected Bibliography. Arthur W. Smith, M.A. Paper. Price, 50 cents. Boulder, Colo.: A. A. Greenman.

This pamphlet was prepared for the use of classes in sanitary science in the College of Liberal Arts, University of Colorado. It contains 420 titles, covering such subjects as infection, immunity, toxins, antitoxins, opsonic methods, disinfection and disinfectants, water, milk and food supplies, sewage disposal, vital statistics, patent medicines, public health administration and others. It is impossible, of course, that a bibliography covering such a range of subjects within so small a compass should make any attempt at exhaustiveness; but the annotations, which are analytical and to some extent critical, add to its usefulness.

QUAIN'S ANATOMY. Vol. I. Embryology. B. T. H. Bryce. Cloth. Pp. 275, with illustrations. Eleventh Edition. Price, $3.00. New York: Longmans, Green & Co., 1908.

This work has long been a recognized authority in anatomy and the present edition is fully up to previous standards. Much new matter has been added, especially in the way of illustrations. The customary chapters on general embryology and fetal development are followed by chapters on the growth of the various organs and systems. In the section on morphogenesis of the spinal cord and brain, a number of original photographs and drawings have been added which help to illuminate this intricate subject. The sections on the development of the special sense organs are also enlarged. The thanks of students and teachers are especially due to the publishers for the excellent index, a point too often overlooked in scientific text-books. Not the least attractive feature is the fact that this work is published in four small volumes, which are much more convenient to use than a single cumbersome book would be.

WANDLUNGEN DER MEDIZIN UND DES AERZTESTANDES IN DEN LETZTEN 50 JAHREN. Von O. von Bollinger. Paper. Pp. 44. Price, 1 mark. München: J. F. Lehmanns Verlag, 1909.

Von Bollinger, in this address delivered on the occasion of his inauguration as rector of the University of Munich, traces the progress of medicine in all its branches during the last century and especially during the last fifty years. In addition to presenting the advance in science he reviews the changes in the position of the medical profession with special reference to the growth of specialism and of quackery, and to the struggle between the *Krankenkassen* and physicians brought on by the industrial insurance legislation. In such a general review it is of course impossible to go much into details, suffice it to say that the reader is given a fair and correct impression of the problems and conditions which the members of the medical profession in Germany have to face.

CONSUMPTION. By C. H. Stanley Davis, M.D., Ph.D., Member of the New Haven County Medical Society. Cloth. Second Edition. Pp. 218. Price, $1.00. New York: E. B. Treat & Co., 1908.

With the avowed object of showing the curability of consumption "from its first beginnings to its last stages" Dr. Davis presents this second edition for popular and professional reading. The positions taken in the various chapters concerning causes, diagnosis, treatment, exercise, etc., are in accord with the generally accepted opinions of the day and the dietary of several sanatoria is set forth in detail. Dr. Davis' optimism regarding the curability of consumption in its later stages is shared by very few practitioners of large experience.

MALARIAL FEVERS. By S. P. James, M.D., D.P.H., Major, Indian Medical Service. Edition 3. Paper. Pp. 94. Calcutta: Superintendent Government Printing, India, 1908.

This is a compendious statement of the nature, diagnosis and treatment of malaria with instructions for the obtaining and treatment of blood films. It gives also directions for identifying the ordinary varieties of mosquito. It is intended especially for assistant surgeons, internes and students, and is particularly adapted to use in India.

PHYSICAL DIAGNOSIS AND LABORATORY DIAGNOSIS. By Henry P. Kohberger, Ph.B., M.D., Associate Professor of Medicine and Director of Clinical Laboratory, University of Pittsburg (Med. Dept.) Flexible leather. Pp. 155. Price, $1. Pittsburgh: Medical Abstract Publishing Co.

OBSTETRICS IN ABSTRACT. By William D. Inglis, A.M., M.D., Professor of Obstetrics in the Starling-Ohio Medical College. Flexible leather. Pp. 171. Price, $1. Pittsburgh: Medical Abstract Publishing Co.

These little books give in a very elementary way the essential facts in physical and laboratory diagnosis and in obstetrics. They may be useful to the recent graduate in helping him to correlate symptoms. They are of convenient "vest pocket" size and are well bound.

Miscellany

Extension of the Frontal Sinus and Ethmoidal Cells Over the Orbit.—Ernst Witt (*Anat. Hefte. Beitr. u. Ref. f. Anat. u. Entwicklgsgesch.*, Abt. 1, 1908, xxxvii, 142) makes a study of the frontal sinus and its adjoining ethmoidal cells in 323 skulls in the dissecting room. Those frontal sinuses and ethmoidal cells which are abnormally large and which extend high up in the frontal bone and over the roof of the orbit are particularly considered. He considers the relations of the frontal sinus and orbital cells (i. e., those ethmoidal cells which extend laterally over the roof of the orbit) as exceedingly variable. This is explained by the mode of development. "The sinus frontalis and cellulæ ethmoidalis arise from anlages, which developmentally are very closely related and which may replace one another." Whichever anlage of the anterior ethmoidal cells first develops a distinct projection into the wall of the nasal cavity becomes the anlage of the frontal sinus. The size of the frontal sinus and orbital cells are likewise very variable in the adult. "In about one-third of the cases the roof of the orbit is more or less undermined by them." Three types of variation are recognized: (1) the roof of the orbit undermined by the sinus frontalis alone; (2) by the sinus frontalis and one cellula orbitalis; (3) by sinus frontalis and two cellulæ orbitales. "Each of these cavities has its individual ostium. The sinus frontalis and cellula orbitalis anterior always open into the middle nasal passage (i. e., middle nasal concha), the cellula orbitalis posterior frequently into the upper. Between the sinus frontalis and the cellula orbitalis anterior a communication sometimes exists." For diagnosis the inspection in the living subject, especially the relations of the arcus superciliares, he considers not trustworthy. "In the opened frontal sinus, on the other hand, the occurrence of a distinct posterior wall indicates the likelihood of the presence of an orbital cell."

Is Cholin Present in the Cerebrospinal Fluid of Epileptics?—S. Kajiura's researches (*Quart. Jour. Exper. Physiol.*, 1908, i, 292) lead him to agree with Halliburton and Mott, whose investigations on the presence of cholin in the cerebrospinal fluid and blood lead them to conclude that cholin is present only in organic diseases of the nervous system, and that this is a fact of diagnostic value in distinguishing diseases in which there is an actual breakdown of nervous material from those which are merely functional. Negative results (by the periodid test) in cases of meningitis are noted. "Inflammation of the meninges does not necessarily cause any noteworthy change in the underlying cerebral matter." Considerable criticism of Donath's micro-polariscopic test for cholin is indulged in, with the conclusion that it is unreliable, since it gives positive results in such cases as cancer of the stomach, nephritis, postbasic meningitis, with normal cerebrospinal fluid or even with distilled water. Kajiura concludes: 1. Rosenheim's periodid test for cholin is both trustworthy and reliable. 2. By this test, cholin is found to be absent from cerebrospinal fluid in cases of genuine epilepsy.

Eighteenth Report on Recent Teratologic Literature.—Dr. William Wright, in the *Journal of Anatomy and Physiology*, October, 1908, compiles and classifies the literature relating to teratologic subjects which has appeared since his last report. Both experimental and general teratology are considered. It is the aim of Dr. Wright to compile these reports approximately once each year and to include all cases of abnormities and malformations which are published from time to time. In this one a short abstract is given of each case reported in the various journals. Several interesting cases of general malformation, of duplication, of fetus in fetu, of defective and rudimentary organs, limbs, head and neck, etc., occur. Many cases of congenital absence of limbs and thoracic and abdominal organs, the transposition of structures and viscera, and congenital defects in the reproductive system are found in the reports. These reports will furnish a brief encyclopedia of teratology. They now cover a period of about twenty-three years.

Recent Researches on the Determination and Heredity of Sex.—Prof. Edmond B. Wilson, after many years' work on the cell, gives in *Science*, Jan. 8, 1909, some of his results and conclusions which have a bearing on the determination of sex. In his opinion, "it may fairly be said that substantial advances in the analysis of the mechanism of sex-production are being made by experimental and cytologic research," since it seems fairly certain that factors which determine sex are no longer purely hypothetical, but are integral units which may be seen with the microscope in the germ cells. The factors which determine sex are to be found in the germ cells of the male. They are what he terms accessory chromosomes and can be easily distinguished microscopically. "In all cases the spermatozoa are formed in pairs, and the chromosomes are so distributed that one member of each pair receives the *x*-element," i. e., the accessory chromosome. Those spermatozoa which receive the accessory chromosome are female-producing, those which do not receive them are male-producing. The egg seems to play a relatively passive rôle in the determination of sex. It seems to have no preference as to whether it shall be fertilized by a male-producing or a female-producing spermatozoön. Sexual predestination and heredity and the various interpretations of sex heredity on the Mendelian theory are discussed.

The Artificial Production of Decidua and the Importance of the Ovaries on the Formation of Decidua.—It is asserted by L. Loeb (*Zentralbl. f. Physiol.*, 1908, xxii, 498) that a decidua has been produced artificially in rabbits and guinea-pigs. Two to 9 days after ovulation (without previous copulation) the uterus wall was slit open, either transversely or longitudinally. A typical decidua resulted. These results were not obtained where the ovaries were taken out immediately after ovulation. A decidua was also formed in a half of the uterus which was transplanted into the subcutaneous tissue. These experiments are put forth as evidence against the nervous influence of the ovary on decidua formation and as favor-

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ing an internal secretion which is carried to the uterus through the blood. The decidua formation in the transplanted piece of the uterus would indicate that the egg does not act specifically, but rather mechanically, upon the mucous membrane of the uterus, and, further, that the uterus has been made ready for this action by an internal secretion of the ovary.

Simple Ulcer of the Stomach in Young People.—E. Parmentier describes a case of simple ulcer of the stomach in a girl of 13, cured by a nine months' course of treatment. In another case the chronic simple ulcer had caused symptoms from time to time since childhood, with occasional melena. The patient was a young woman of 20. The recurrence of symptoms in this patient several times after apparent cure from different courses of treatment shows the uncertainty of the outlook in some cases. In his communication in the *Bull. de la Soc. Méd. des Hôp.*, Dec. 24, 1908, p. 812, he reviews sixteen other cases that have been published of simple ulcer in children under 14, six of them from American literature. In some cases the only symptoms were convulsions and unconsciousness when perforation occurred, followed by death in a few hours. In three cases the children died from progressive inanition. A cure is recorded in some of the cases, but it is more probable that it was merely a relative and temporary cure, as trouble is liable to develop again later.

Arachnoidism.—S. Mazza applies this term to the syndrome produced by the bite of a poisonous spider, and in the *Semana Medica*, January 7, he gives an illustrated description of a case with sloughing of part of the arm a month after the bite. The patient was a man of 42 and when seen twenty-four hours after the bite the general symptoms included chills, vomiting, jaundice and delirium, slow and small pulse, scanty, blood-stained urine and bloody diarrhea with fever. He recovered under injection of salt solution 500 c.c. every twelve hours with caffein every three hours for nearly three weeks and camphorated oil every six hours at first. Strychnin was also given at first, and ergot to combat the tendency to hemorrhage, with local treatment of the lesion on the arm and oxygen to combat the dyspnea. On account of the finding of methemoglobin in the blood, as in intoxication from potassium chlorate, he gave an enema of sodium bicarbonate and glycerin. It may have been a mere coincidence but the signs of hemolysis subsided after this enema. In another case the bite was from an ordinary centipede; exophthalmos, chills and general depression were the main symptoms.

The Ductless Glands (Pituitary Body, Suprarenals and Ovaries) in Epilepsy.—Claude and Schmiergeld (*Compt. rend. Soc. de biol.*, 1908, lxv, 196-199) give the results of an examination of these glands of internal secretion in fifteen cases of epilepsy. In three cases the pituitary body showed a localized area of sclerosis. Capillary congestion was present in one. From the distribution of the cellular granules and the staining reactions of the cells and the increase in the colloid material in the above three cases, a hypersecretion of the pituitary body is suggested. The pituitary body in the other twelve cases showed histologic evidence of a decrease of functional activity. In all cases the suprarenals were smaller than normal. In seven cases the histologic picture was distinctly that of hypofunctional activity. In only one case was there evidence of hypersecretion of the gland. With the ovary the changes were not so pronounced, and their significance was more difficult to determine. The ovaries were small and usually poor in Graffian follicles. An examination of the pancreas, liver and kidney revealed nothing.

Vaccination Against Cholera.—A Russian committee including Professor Podwyssotzki has drawn up a circular of instructions for prophylactic vaccination against cholera, and the circular has been officially adopted by the authorities and published for general distribution. The following points are emphasized: 1. The statistics to date show that prophylactic vaccination guarantees protection to a certain extent against cholera, but the vaccinated must be careful to observe the general hygienic precautions. 2. The vaccination must not be compulsory. 3. Anticholera vaccination is harmless and causes only a brief reaction, such as slight swelling and tenderness of the wound, higher temperature, headache, occasional swelling of the glands and slight digestive disturbances. Severe reaction occurs only exceptionally. 4. Of the two methods in vogue: vaccination with living cultures (Haffkine), or with killed cultures (Kolle), the latter is to be preferred, as the public have more confidence in this technic. 5. During an epidemic of cholera the vaccination must be done with great care, to exclude those already infected, and those liable to be exposed to infection before immunity is realized. On this account, during an epidemic, the excreta should be examined for cholera germs; if found the patient should not be vaccinated. All the vaccinated must be warned that immunity is not realized until the fifth or sixth day, consequently, during this interval they must avoid chances for contagion. 6. The vaccination must be repeated two or three times at intervals of from five to seven days, or not until after the signs of the reaction have vanished. The first dose of from 0.5 to 1 c.c. can be increased to 2 or 3 c.c. on the repetition. Children under 2 years are given 1/10 of this dosage; between 2 and 10 from 1/10 to ½; and between 10 to 15 from ½ to ¾. A pregnant woman should be given only a small dose. Acute febrile diseases and acute gastrointestinal catarrh contraindicate the vaccination. Great caution should be observed in case of debilitated, anemic persons. 7. Physicians should keep a careful record of all vaccinations, noting the name, age, profession and residence, state of health, whether the stools have been examined for cholera, the kind of cholera vaccine used, when prepared, place of injection and dosage each time, date of each vaccination, form and duration of the reaction, and the outcome of the vaccination, whether the patient escapes the cholera or is affected or dies, with dates. The circular is given in full in the *St. Petersburg med. Wochenschrift*, Jan. 30, 1909.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ARIZONA: Phoenix, April 5-6. Sec., Dr. Ancil Martin.

ARKANSAS: Three boards, each at Little Rock, April 13. Regular Sec., Dr. F. T. Murphy, Brinkley; Homeopathic Sec., Dr. P. C. Williams, Texarkana; Eclectic Sec., Dr. A. J. Widener, Little Rock.

CALIFORNIA: San Francisco, April 6. Sec., Dr. Charles L. Tisdale, Butler Bldg.

COLORADO: Denver, April 6. Sec., Dr. S. D. VanMeter, 1723 Tremont St.

DISTRICT OF COLUMBIA: Washington, April 13-16. Sec., Dr. George C. Ober, 210 B St., S. E.

IDAHO: Boise, April 6-7. Sec., Dr. W. F. Howard, Pocatello.

ILLINOIS: Northwestern University Bldg., Chicago, April 15-17. Sec., Dr. J. A. Egan, Springfield.

MINNESOTA: Old Capitol, St. Paul, April 6-9. Sec., Dr. W. S. Fullerton, 214 Am. National Bank Bldg.

MONTANA: The Capitol, Helena, April 6. Sec., Dr. W. C. Riddell.

NORTH DAKOTA: Grand Forks, April 6-8. Sec., Dr. H. M. Wheeler.

OKLAHOMA: Guthrie, April 13. Sec., Dr. Frank P. Davis, Enid.

RHODE ISLAND: State House, Providence, April 1-2. Sec., Dr. Gardner T. Swarts, 315 State House.

UTAH: Salt Lake City, April 5-6. Sec., Dr. R. W. Fisher.

WEST VIRGINIA: Huntington, April 13-15. Sec., Dr. H. A. Barbee, Point Pleasant.

Council on Medical Education Conference

The fifth annual conference of the Council on Medical Education will be held at the Auditorium Hotel, Chicago, Monday, April 5, 1909, the session to begin at 10 o'clock. Besides the reports of the Chairman and the Secretary, there will be a report from a special committee on "Standard Medical Curriculum." There will also be addresses on "Some Results of the Higher Standards of Preliminary Education" and on "The Character of the State License Examination." Many questions of special interest to members of state examining boards will be discussed. A large attendance is already assured and a most interesting session is expected.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 8-11.

Assn. of Amer. Med. Colleges, New York, Mar. 15-16.
California, Medical Soc. of State of, San Jose, April 20.
District of Columbia, Medical Assn. of, Washington, April 27.
Florida Medical Association, Pensacola, April 7-9.
Georgia, Medical Association of, Macon, April 21.
Mississippi State Medical Association, Jackson, April 13.
Missouri Valley, Medical Society of, St. Joseph, March 18-19.
South Carolina Medical Association, Summerville, April 21.
Tennessee State Medical Association, Nashville, April 13-15.
Tropical Medicine, American Society of, Washington, April 10.

CHICAGO MEDICAL AND CHICAGO NEUROLOGICAL SOCIETIES

Joint Meeting, held Feb. 10, 1909

DR. L. HARRISON METTLER, President of the Chicago Neurological Society, in the Chair

SYMPOSIUM ON PSYCHOTHERAPY

The Religious Therapeutic Movement

DR. ISADOR H. CORIAT, Boston, Mass.: Probably no movement in contemporary medicine has attracted more attention and more criticism than the work taken up by the Emmanuel Church in Boston, and called the Emmanuel movement. Why, I do not know, because what the Emmanuel Church has attempted is the establishment of a psychotherapeutic clinic for the treatment of a limited type of functional nervous disorders under rigid medical control. The action of the mind on the body is well known, and recently in Russia, under the leadership of the physiologist, Pavloff, methods of action of mind on the body have been applied to the lower animals. For instance, he will take a dog, whose esophagus has been opened in the neck, and in which a gastric fistula has been made, and give that dog some meat to swallow. Of course, the meat comes out from the esophageal fistula and never reaches the stomach. Immediately there is the secretion of gastric juice. He gives the dog pebbles to swallow, and there is no secretion of gastric juice. To my mind, experiments like that speak more than anything for the action of the mind on certain bodily functions. Medicine, it appears to me, is no longer limited to the dispensing of drugs, to the application of electricity, or to hydrotherapy, or to any of the various methods; medical men have broadened out and are in touch with every human activity. We know from the work of the Massachusetts General Hospital how remarkable have been the results in the so-called social service department, where patients are recommended by physicians in whom there seems to be nothing particularly wrong, yet seem to be out of harmony, dissatisfied with their surroundings. The social worker takes those patients and modifies their surroundings, with the consequence of cure or alleviation of the condition. In 1906, Dr. Worcester and Dr. McComb started what has since become known as the Emmanuel movement; but unfortunately it has spread in every direction. Sometimes, I might say, it has spread into incompetent hands. Of course, they are not responsible for what others are doing; they are only responsible for their own work. Dr. McComb is a psychologist, and Dr. Worcester is a Doctor of Philosophy and Professor of Psychology, well-equipped for the psychologic treatment of certain nervous disorders. Patients are treated individually. There is no class treatment. Small numbers at a time are taken. They are only treated after they pledge themselves to remain for a number of weeks at a time. The work is under absolute medical control. About 50 per cent. of the patients are sent directly by physicians, with notes, and these physicians suggest in these notes that there is nothing organically wrong, and they believe the patient or patients will be proper subjects for psychic treatment. The other 50 per cent. of the patients are examined on certain clinic days, and only those patients are accepted who are proper subjects for psychic treatment. Organic cases are never accepted, or cases in which an organic complication predominates over the functional condition. Of all patients who apply to the Emmanuel clinic, about 75 per cent. are rejected. The other 25 per cent. are accepted. Drs. Worcester and McComb work with only a small group at a time; the others are put on the waiting list. If a patient should come without notifying his or her physician, and, at the same time is under the treatment of a physician, that patient is not accepted. The patient is sent back to the physician with the request that a written note be forthcoming.

The criticisms of the movement are these: (1) The danger of the spread of the movement into incompetent hands. As medical men we must recognize that incompetent men, incompetent clergymen, may start this work after reading two or three books, without a long psychologic preparation. There they will fail; they will bring justified criticism of the medical profession down on their heads. (2) The criticism has been that these ministers are practicing medicine. Let us see if they are: For a long time they have limited their cases to those which show a well-recognized moral, ethical or spiritual defect, whether or not that was the symptom underlying the functional disorder. I presume that the clergyman is well adapted to treat that type of case. The patient does not expect spiritual consolation or ethical lectures from his physician, but does expect them from his clergyman, and therein lies the therapeutic value of any such method as that. Clergymen should take only patients in whom the moral, ethical or spiritual elements predominate, and then only under rigid medical control. In the clinic in Boston not only is the patient given a thorough medical examination from the beginning, but, if accepted, that patient is kept under constant medical control and reappears from time to time for re-examination. On account of the storm of criticism that has arisen in Boston, a new method of medical control has been instituted which will soon go into effect. A committee composed of four physicians of Boston formulated several rules which have been published in the various medical journals. The examination of patients at the church clinic has been abolished under these new rules. If a patient comes without a note from a physician, he is given an alphabetical list of physicians attached to the various hospitals. The patient is sent to an internist who makes an examination and states whether or not the patient is fit for the psychotherapeutic treatment of the Emmanuel Church. If a specialist is necessary, the internist calls in a specialist. Even before these rules were instituted the movement was safeguarded by rigid medical control, and under these new rules the control is still more rigid. No patient is accepted unless he pledges himself to remain under treatment for at least six weeks, and if at the end of that time longer treatment is necessary he is expected to remain longer. The methods used are in line with well-recognized methods of psychotherapeutics. The results with alcoholics have been very gratifying. Many of the poorer alcoholics not only are given psychotherapeutic treatment, but the social service worker inquires into the surroundings, the home conditions, and if the individual lives in a district of the city where the temptation to drink is the greatest, arrangements are made to move him to more cheerful surroundings. If there are any dangers in this clinic, they are thoroughly safeguarded by the training of the clergymen who have undertaken the work and by the thorough medical control over such work. The criticism that the clergyman is taking up the physician's work does not appear to me to be valid, because these clergymen are doing a type of work for which they are eminently fitted as clergymen and as psychologists, a type of work which we as physicians could not take up, because we have not had that particular form of training.

Psychotherapy from the Psychologist's Point of View

PROF. JAMES R. ANGELL, University of Michigan: I have been amazed to see how widely the view still obtains that some sorts of mental processes do not have corresponding brain processes. When we talk about therapeutic methods of treating diseases through the mind, it does not mean

that we are not producing any change in the nervous system; it simply means that we are producing changes in the nervous system by initiating changes in what we call the mind; and, as a matter of fact, when we come to conclusions and see what we have done, we have said something, done something, or brought something to pass which affects the sense-organs of the person with whom we are dealing, and that process inevitably affects the brain. In such cases we are dealing with nothing which excludes the action of the brain or nervous processes. Mental processes have corresponding brain processes and if we are not able to point them out at any particular time it is in consequence of our ignorance and not because the facts are lacking to substantiate it. So far as I know, psychologists connected with universities are, for the most part, fundamentally opposed to anything which might be called mysticism in reference to this movement. I think a good deal of the antagonism we have had so far toward certain phases of this psychotherapeutic movement has been based on the fact that an element of mysticism has been injected into it. I take it that three distinct kinds of practice are represented in this movement: First, I should recognize that which is being carried on by physicians, neurologists and medical men; second, I should recognize that which is being carried on by ministers or laymen in conjunction with physicians and under their guidance; third, I should distinguish that practice which is being carried on by persons who absolutely reject all reference to medical guidance, and I include in that class the Christian Scientists and the mind cures of various sorts in one form or another.

From the beginning of time every physician has made more or less use of psychotherapeutic methods, in that they have brought and are bringing to the sickroom a hopeful personality, cheerfulness, and an attitude of encouragement to the patient. I have nothing but the deepest respect and the deepest confidence in the outcome of the use of psychotherapeutic methods by medical men. It is from medical men we must expect real advancement and information of what has been and can be done in this direction. Our attitude toward the ministers or laymen who are working under medical control is essentially this: There is a large group of individuals who, to all intents and purposes, are mentally abnormal, who need help, and who, in the first place, are not likely to go to a physician to get that help, because their troubles are perhaps moral rather than physical. If they should consult a physician, they are not likely to get from the average physician what they really need, and I can not but believe that ministers who are well trained for their duties have a wide range of usefulness in this particular direction; and I think it is problematical whether the medical practitioner can really fill the bill, and whether he will wish to try to, or whether he ought to try to.

Into the training of the average medical man there should be introduced a larger measure of psychologic work than has heretofore been the custom. The better medical colleges recognize this and are providing for instruction in psychologic scientific work as part of the regular curriculum. At present, however, the average psychologic department does not offer to the medical school exactly what it ought to have, and it will require some adjustment in almost all institutions. The average practitioner has obtained his knowledge of psychotherapy either by personal experience or by working in the office of a neurologist, and the acquirement of this knowledge has been rather accidental than an essential and radical part of medical training.

Medical Uses of Hypnotism

DR. HUGH T PATRICK: An individual who is easily hypnotizable is one who is instinctively obedient and credulous, and who believes without criticism, without analysis, and without any particular process of reasoning, what is told him. It is well-knowa that the percentage of hypnotizable individuals in the German army is great, because these soldiers are so thoroughly trained in obedience that it becomes instinctive. On the other hand, certain individuals are inherently refractory to hypnotism. Many of these individuals come and request to be hypnotized, and believe that they can be cured by hypnotism. They are largely the type of individuals who read about cases in newspapers and magazines; they are patients who attempt some sort of self-analysis of their own symptoms, and of their own condition. They reason in their own particular way about the nature of their maladies; they have distinct and sometimes very fixed notions. They have the exaggerated ego, accompanied with a peculiar sort of mental hypersensitiveness and fixity in their own opinions. These people instinctively, but not purposely, keep awake to see how it feels to be hypnotized. They are the refractory individuals, in whom it is needless to make the attempt. In everyday practice hypnotism can be used, first, in diagnosis, and second, in treatment. Sometimes hypnotism is of more use in diagnosis than in treatment. It is useful sometimes in the diagnosis of various seizures or attacks, in nervous explosions of one kind or another, and one of these is the fit or convulsion. Occasionally, it is impossible to distinguish from the symptoms which we perceive whether a given patient is suffering from hysteria or from epilepsy. Occasionally hypnotism may clear it up. For example, not long ago a man was brought to me whose wife gave an account of his having had an epileptic seizure, and immediately following it an epileptic furor. After the fit he passed into a condition of great excitement, with destructibility, in which he smashed open a door, tore down the curtains, chased his wife through the house, got a gun and chased his brother-in-law down the yard, out into the road for some distance, and threatened to shoot him. During the physical examination there were two little things that occurred that made me doubt the correctness of the diagnosis I was then forming in my mind, and after further examination there was a question in my mind whether this had not been an hysterical attack. I put the man to sleep, and he related to me in detail all that had occurred during this seizure, the circumstances of which he had been ignorant of. He did not remember anything whatever until a considerable time after the subsidence of the furor part of his attack. During hypnosis he related every detail of what he did, and why he yelled and screamed and acted as he did.

Hypnosis helps in the diagnosis between hysteria and epilepsy, or between the hysterical and epileptic state. Hypnotism is an aid in the differential diagnosis between functional disease and organic disease. Hiccough may be a rebellious symptom of grave organic disease. It occurs as a very troublesome, rebellious and continuous symptom of hysteria, and sometimes hypnosis will settle the diagnosis at once. Hypnotism also helps in the diagnosis in those cases in which there is a combination of organic disease and functional disease, or organic disease and hysteria, in which suggestion during hypnosis will remove or alter certain symptoms, so as to enable the practitioner to distinguish that part of the symptomatology due to organic disease from that due to functional trouble.

When we come to therapeutics, in my opinion the cases in which suggestion during hypnosis is the basis of the treatment are very infrequent. I could enumerate many clinics where hypnotism has been used to a great extent for a more or less limited period. I could also tell from my own experience of a good many more or less prominent medical men who have used it to a greater or less extent and have gradually or nearly abandoned it. In organic diseases hypnotism has an exceedingly limited use, but it now and then has a very distinct and very great use. Hypnotism is of little or no avail in cases of melancholia, paranoia, dementia præcox, etc. It may be of use nowadays in that group of cases which comes under the head of psychasthenia—phobias, imperative ideas, etc. In some of these hypnotism is of great use.

Psychotherapy from the Physician's Point of View

DR. SYDNEY KUH: Our influence on a patient's mind begins with the moment that the sufferer enters the office. The appearance of the room, of the medical apparatus that it con-

tains, and the physician's personality, are the first factors which often determine whether or not the confidence of the patient so essential for success, can be obtained. The physician's method of dealing with his patient is of paramount importance. The neurotic individual is usually a keen observer. He watches with the greatest interest the examination of the physician, notes whether this or that organ has been overlooked, and whether the investigation is made in a careful and painstaking or in a slovenly manner. Next to the physician's personality, I should value the influence of the first examination most highly. It must indicate to the patient that his physician takes a genuine interest in his case. The best results in psychotherapy are undoubtedly obtained when the patient is transplanted into new surroundings; for most of the serious and tedious cases such a step is absolutely necessary. Even the nurse should not as a rule, accompany the patient from his home to the sanitarium. Here begins a process of re-education, which in every instance must be adapted to the individual, and for which no hard and fast rules can be laid down. An intelligent nurse, one who supports the physician understandingly in his efforts, who strengthens the patient's confidence, who diverts his mind from his troubles and pains and aches into more pleasant channels, is a *sine qua non* of success. For patients who are anemic, emaciated, poorly nourished, and for those who suffer from anorexia, hypochondriasis and the various phobias, a rest cure is often the best thing. Others may do better if sent to the country or to the mountains, where they receive new impressions and where an occupation may be found which keeps them busy, without making great demands in the way of intellectual labor. Again, others will progress most rapidly toward recovery in an institution adapted for the so-called work cure, a place where carefully regulated manual labor is prescribed according to the needs of the case. The therapeutic agent under discussion is most useful in such functional neuroses as hysteria, neurasthenia and psychasthenia. But its usefulness is not limited to such troubles. All of us make use of psychotherapy constantly, often utterly unconsciously, as a palliative in all manner of organic disease. To instill hope into the breast of the despairing, to arouse the individual who has given up the struggle, to fight anew, are things that are well worth doing, even in organic and incurable diseases. That we have not recognized the importance of psychotherapy has driven a host of sufferers into the hands of laymen, who were willing and more or less capable to make use of a method, perfectly legitimate in itself, but on which the medical profession frowned. In place of abusing those who are ready to do what we ourselves should have done long ago, let us make use of the powerful weapon at our command, and the cause for complaint will disappear. Let us wake up!

Discussion on Psychotherapy

DR. ARCHIBALD CHURCH: If the so-called Emmanuel movement can be controlled under medical direction and can be limited to the moral torpitudes and the religious disturbances which seem to be proper subjects for activity, and to the class of patients who are accepted in the Emmanuel church movement, there should be no quarrel with it; but in view of the fact that the church has been losing its dignity, its importance, its influence, and that the clergy has been shrinking in its own estimation; that theological schools have been experiencing difficulty in securing candidates for admission and students to enter the priesthood; that the churches on Michigan Avenue are practically in financial straits; that the attendance is dwindling constantly, it is not unlikely that the churches may find themselves with a Frankenstein which will give them a merry chase before it can be overtaken, and which may result to the great detriment of the dignity of the church as a whole—I mean all denominations. If this movement can influence individuals morally, or if it can cure neurasthenics and hysterics, well and good; but the difficulty is that as soon as the fashion loses its caste, or changes, these people are going to seek some other avenue for relief, some other mystical sort of aid, and the church will find itself in a position of great discomfort, with loss of its dignity and prestige.

DR. OSCAR A. KING: I do not think it is at all desirable that we, as a profession, should go into partnership with clergymen in the practice of medicine. Every practitioner of medicine has views on psychology. Every one, long before the name was invented, had a practical psychology. The housebreaker and the policemen have a practical psychology that serves their purpose; and the physician has a psychology that serves his purpose. The physician is the man to make diagnoses, and not laymen. I do not believe we will ever get any benefit by associating with people who are wholly unqualified to practice medicine, who are untrained and unfit for this work, and I hope Chicago will not join Boston in this movement.

DR. JULIUS GRINKER: The class of people who go to Emmanuel movement clinics do not care to seek the aid of physicians. When people read of this movement and of the work that is being done, of the mysticism that goes with it, they feel an impulse to go there. I question whether the motives of some of the men undertaking this work are purely unselfish.

DR. D. HECHT: I am glad that the Emmanuel movement is being safeguarded on all sides in Boston; but great danger lies in the fact that it may extend beyond the confines of Boston and perhaps get into less scrupulous hands, with less safeguarding. Phrenologically speaking, the bump of credulity has little or nothing to do with intellect. I have not been able to correlate the two. I have known judges or attorneys, very erudite men, go off on a tangent with the most irresponsible; yet they must be given credit for their intellectual attainments.

DR. L. A. DERDIGER: I would advise physicians to attend the meetings of these cults, get acquainted with the people, analyze what they are doing, and discuss the subjects with them. If this is done, many of them will come to the physician and say: "You have reasoned with me, you have pointed out that I have been misled, or that I have been mistaken as to this method of cure.

PHILADELPHIA COUNTY MEDICAL SOCIETY

Regular Meeting, held Feb. 10, 1909

The President, DR. FREDERICK P. HENRY, in the Chair

Oral Prophylaxis from the Viewpoint of Abdominal Surgery

DR. STEPHEN E. TRACY: Infections of the mouth may play an important part in the production of disease in the gastro-intestinal tract and in other parts of the body, and may predispose the patient to many diseases. Clinicians, as a rule, do not pay sufficient attention to the condition of the teeth and the cleanliness of the mouth. Patients about to be subjected to operation should have the teeth, the interstices and the gum margins painted with a solution of one of the non-irritating salts of silver and then sprayed with pure hydrogen dioxid under pressure. The same surfaces should then be painted with tincture of iodin and again sprayed with pure hydrogen dioxid, followed with atomization with a pleasant, alkaline, antiseptic mouth wash. The nares and pharynx should be sprayed with a solution of hydrogen dioxid and water half an hour before the anesthetic is administered. By following this technic certain postoperative complications are avoided and convalescence is hastened.

Orthodontia As Related to Other Bodily Relations

DR. S. MERRILL WEEKS: Teeth in abnormal relations prevent proper cleansing and therefore are not hygienic. They are a predisposing factor in alimentary disorders. Irregularly disposed teeth, because of their largely diminished facility for mastication, favor the habit of bolting the food, causing the food to be taken into the stomach in too large portions and unsalivated, thereby having a detrimental influence on digestion. Some nose and throat disorders are so closely associated with a certain class of irregularities as to

give the orthodontist and the rhinologist a common interest both in etiology and treatment.

Value of the X-Ray in Diagnosis of Abnormalities of the Teeth

DR. MATTHEW H. CRYER AND DR. R. H. IVY: Many cases are encountered of pain referred to the region of the teeth in which diagnosis would be impossible without the use of the *x*-ray. The commonest cause of neuralgia in which the *x*-rays are of value is that of an impacted tooth. An impacted lower third molar, for example, may cause neuralgia by pressing against the roots of the second molar, causing resorption of the dentine until the pulp is exposed and the consequent irritation sets up neuralgia; or, the roots of the impacted tooth may press backward on the adjacent inferior dental nerve. Again, the irritation set up may cause a condensation of the surrounding cancellated bone with pressure on the inferior dental nerve and its minute branches which ramify throughout the bone. Impacted teeth frequently set up cellulitis of the surrounding region, extending up to the temporomandibular joint and causing false ankylosis. Other abnormalities in which the *x*-rays are of value are malformation or malposition of roots of erupted teeth, inflammatory conditions of the bone, which may or may not be caused by diseased teeth, local thickenings of bone, new growths, supernumerary teeth encysted within the jaw, malformation of the jaw bones, and pressure of deciduous teeth on unerupted permanent teeth which in turn press on the nerve. "Pulp stones" are sometimes shown by the *x*-ray. So satisfactory has been the use of the *x*-ray in these and other dental conditions its use can not be advocated too strongly. One patient, from whom a skiagraph was taken, suffered severe pain for years in the posterior part of the upper jaw. There was shown an unerupted third molar tooth with its root projecting above the floor of the maxillary sinus, showing that it interfered with the nerve supply of the upper teeth. An unusual condition is that of a third molar beneath and in front of the second molar, pressing against the roots of the first molar. In one patient who had exophthalmic goiter in addition to trifacial neuralgia the neuralgia was ascribed to brain tumor. The *x*-ray showed an impacted lower third molar and a thickened condition of the bone just below the roots of the second molar.

Medicolegal

Injury to Passenger Not Physically Sound

The Second Appellate Division of the Supreme Court of New York says that the plaintiff in the case of Miehlke vs. Nassau Electric Railroad Co. was a married woman, and it appeared from the evidence that she had been under treatment for some time for uterine troubles, and the defendant insisted that the evidence failed to show that the subsequent injuries, which centered in her right side in the vicinity of the right ovary, which was afterwards removed, were the sole cause of this necessary removal. But a passenger is not bound to be physically sound. A woman is not bound to be free from all complications in order to recover for injuries which she actually sustains. While the defendant could not be held liable for the condition in which the plaintiff was at the time of the accident, it was liable for any injury which it negligently inflicted on her, even though that injury would have been less disastrous if she had been in perfect condition at the time of the accident.

Power of City to Order Destruction of Old Building Infected with Smallpox Germs

The Supreme Court of Illinois had, in the case of Sings and others vs. City of Joliet, the question of the power of the city to pass an ordinance to condemn as a nuisance a single old wooden building and to authorize and direct the destruction of the same and its contents. The ordinance stated that, whereas, the building in question for some time had been, and still was, occupied by a large number of persons, all of whom were more or less exposed to, infected by, and suffering with the dread contagious and infectious disease known as smallpox; was thoroughly impregnated with the germs of that disease, and was, by reason of its old age, state of deterioration, and otherwise, in such condition that it could not be successfully disinfected so as to wholly destroy such germs, in consequence of which it was extremely dangerous and detrimental to the health of the citizens and residents of the city, and the necessity existed for prompt action to prevent the spread of such contagious disease, therefore the building was declared to be a public nuisance and condemned to destruction as such, after the removal by the health commissioner of the city of all occupants to the pest house, or some other place temporarily to be used as a place of isolation.

The court does not accede to the contention that the city was without lawful authority to pass the ordinance and to do the acts charged under the provision of the state constitution that no person shall be deprived of property without due process of law. It points out that by statute the city council shall have power "to declare what shall be a nuisance and to abate the same;" also, to do all acts and make all regulations necessary or expedient for the promotion of health or the suppression of disease.

Nor does the court accept the argument that the city was without power to pass an ordinance which had application only to the property involved in this suit; that the power given to declare a nuisance must be exercised by an ordinance general in its character, operating uniformly on all persons and on all property of the same character within the city. It says that while the precise steps necessary to be taken by the city in declaring a thing to be a nuisance have never been pointed out by this court, it is of opinion that the city, in the exercise of its police power, if the emergency existed, as it appeared to have existed from the recitals of the ordinance, had the power to declare the existence of the nuisance by the ordinance which it passed, provided the location and condition of the building were such that the method ordained was the only one which could in reason be used that would be effective in preventing the spread of the disease. Many cases can readily be imagined in which the city must proceed in a manner exceedingly summary both to declare and to abate a nuisance, and in such case the passage of an ordinance such as that here involved would seem to be a declaration sufficiently formal.

If the conditions recited in the ordinance existed, and if the building was so located as that persons in the city could not by the city authorities in the exercise of reasonable precaution, be excluded from the building or prevented from approaching so near thereunto as to be in danger of contagion therefrom, it would appear that the building was, in fact, a nuisance and that it might lawfully be abated.

Neither were the owners of the property necessarily entitled, before it was actually destroyed, to have a day in court, where the question whether the property was, in fact, a nuisance might be adjudicated before the building was destroyed. If in every emergency the owner of the property, the destruction of which is deemed necessary, must be given a hearing, the exercise of the police power would in many instances be so delayed that serious injury to public health and other public interests would result.

But the law in Illinois gives no binding or final effect to the decision of the city council on the question of fact of whether the building was a nuisance. On the contrary, this question remains an open one, which may be adjudicated.

To declare and abate a nuisance is within the scope of the power conferred on the city, and if the council, in the exercise of that power, destroys or expressly authorizes the destruction of property which, in fact, is not a nuisance, the municipality must be held liable for damages sustained by the owner. The city was not justified in destroying this property unless the statement of alleged facts contained in the ordinance was true, and then only if the property was so located and in such condition that the danger to public health

therefrom could not be obviated by the use of some reasonable measures less drastic than the absolute destruction of the property.

No Hearing Need Be Granted Before Food is Seized and Destroyed

The Supreme Court of the United States had, in North American Cold Storage Co. vs. City of Chicago, a case involving principles of considerable general importance to boards of health and health officers. This was a suit to enjoin the city, its commissioner of health, chief food inspector and other officers from summarily seizing and destroying, under a city ordinance, food in cold storage as unfit for human consumption. But the court says it is of opinion that provision for a hearing before seizure and condemnation and destruction of food which is unwholesome and unfit for use is not necessary. The right to so seize is based on the right and duty of the state to protect and guard, as far as possible, the lives and health of its inhabitants, and that it is proper to provide that food which is unfit for human consumption should be summarily seized and destroyed to prevent the danger which would arise from eating it. The right to so seize and destroy is, of course, based on the fact that the food is not fit to be eaten. Food that is in such a condition, if kept for sale or in danger of being sold, is in itself a nuisance, and a nuisance of the most dangerous kind, involving, as it does, the health, if not the lives, of persons who may eat it.

A determination on the part of the seizing officers that food is in an unfit condition to be eaten is not a decision which concludes the owner. The ex parte (one-sided) finding of the health officers as to the fact is not in any way binding on those who own or claim the right to sell the food.

If a party can not get his hearing in advance of the seizure and destruction, he has the right to have it afterward, which right may be claimed on the trial in an action brought for the destruction of his property; and in that action those who destroyed it can only successfully defend if the jury shall find the fact of unwholesomeness, as claimed by them.

It was contended that there was no emergency in this case requiring speedy action for the destruction of the poultry in question in order to protect the public health from danger resulting from consumption of such poultry. It was said that the food was in cold storage, and that it would continue in the same condition it then was for three months, if properly stored, and that therefore the defendants had ample time in which to give notice to the complainant or the owner and have a hearing of the question as to the condition of the poultry; and, as the ordinance provided for no hearing, it was void. But the court thinks this was not required.

The power of the legislature to enact laws in relation to the public health being conceded, as it must be, it is to a great extent within legislative discretion as to whether any hearing need be given before the destruction of unwholesome food which is unfit for human consumption. If a hearing were to be always necessary, even under the circumstances of this case, the question at once arises as to what is to be done with the food in the meantime. Is it to remain with the cold storage company, and, if so, under what security that it will not be removed? To be sure that it will not be removed during the time necessary for the hearing, which might frequently be indefinitely prolonged, some guard would probably have to be placed over the subject matter of investigation, which would involve expense, and might not even then prove effectual. What is the emergency which would render a hearing unnecessary? The court thinks when the question is one regarding the destruction of food which is not fit for human use the emergency must be one which would fairly appeal to the reasonable discretion of the legislature as to the necessity for a prior hearing, and in that case its decision would not be a subject for review by the courts. As the owner of the food or its custodian is amply protected against the party seizing the food, who must, in a subsequent action against him, show as a fact that it was within the statute, the court thinks that due process of law is not denied the owner or custodian by the destruction of the food alleged to be unwholesome and unfit for human food without a preliminary hearing.

Even if it be a fact that some value may remain for certain purposes in food that is unfit for human consumption, the right to destroy it is not, on that acount, taken away. The small value that might remain in said food is a mere incident, and furnishes no defense to its destruction when it is plainly kept to be sold at some time as food.

Neither City, Board of Health, Nor Officers Liable for Reasonable Mistake Made in Quarantining

The Court of Errors and Appeals of New Jersey says that the case of Valentine vs. City of Englewood and others was brought to recover damages for alleged false imprisonment and for libel. The defendants pleaded in justification that there were 30 cases of scarlet fever in the city, and that the board of health had reasonable and probable cause to believe that the plaintiff's daughter was ill of the disease, and thereupon caused the plaintiff to be notified that they had declared his house quarantined, etc. But the plaintiff denied that the board of health had reasonable and probable cause to believe that his daughter was suffering from scarlet fever, and tendered issue thereon.

Taking up first the question of the liability of the city, the court holds that there was none, because a municipal corporation is not liable for the acts of a board of health created by public statute for the public benefit, even though its members are appointed by the municipal authorities. Moreover, the court holds that the members of a board of health, acting in performance of a public duty under a public statute to prevent the spread of an infectious or contagious disease, are not personally liable in a civil action for damages arising out of their acts in establishing a quarantine, even where the disease does not actually exist, provided they act in good faith. The exemption of officers from liability extends only to matters in which they have jurisdiction under the statutes, and it may be said that the board of health has no jurisdiction unless a cause of disease actually exists. But this view is too narrow. It is enough if the matter is colorably, though not really, within their jurisdiction.

Section 15 of the New Jersey board of health act, which forbids suits against the board, its officers or agents, unless on proof that the board acted without reasonable and probable cause to believe that the alleged cause of disease was in fact prejudicial and hazardous to the public health, does not infringe the constitutional provisions protecting private property and individual liberty. That section in effect gives an action against the board on proof of the facts therein set forth, but in such suits the question of reasonable and probable cause is for the court.

In giving this action, the legislature had the right to determine what facts should be necessary to sustain it. They imposed no novel or unreasonable condition. The provision requiring that the plaintiff should show that the board of health acted without reasonable or probable cause is in line with the existing common law in cases of this character. By common law an officer was justified, in certain cases, in making an arrest, where he had reasonable and probable cause for belief in the guilt of the person detained; and, in actions for libel, a communication, fairly made by a person in the discharge of some public or private duty, whether legal or moral, is privileged, in the absence of proof of malice. The principle underlying those cases was applicable to this one. By the New Jersey act of March 24, 1903, it is made a crime for any person, having reason to believe that he is affected with scarlet fever, to appear in any public place, and for any person knowingly to subject another, without the latter's knowledge, to exposure to the infection of any such disease. The court does not mean to say that this statute reached the present case; but it can hardly be libelous for the board of health, in good faith, to give notice of the existence of scarlet fever, when it is a crime for one who has reason to believe that he is affected with the disease to appear in public; and it must be within the power of the legislature to give the right of restraint, amounting to imprisonment, to public officers who have reasonable and probable cause to believe that the crime

denounced by the act of 1903 has been, or is likely to be committed.

The question remained whether a case was made out under this statute against any of the defendants. As to the board of health, it was clear that it acted on the advice of its own physician, supported by the report made to it of the opinion of four other local physicians. The court thinks that it was not bound to accept the opinion of a physician called by the plaintiff and a specialist called from New York, but was justified in relying on the advice of its own officer.

The case as to the physician himself was somewhat different. But in the court's judgment the case failed to establish a want of reasonable and probable cause against him. He seemed to have been a reputable physician, acting according to his best light, in a case which four of his fellow physicians, to whom the symptoms were described, pronounced to be scarlet fever. Whether it was or not, he had reasonable and probable cause to think it so. The evidence of what the specialist mentioned said to him, or what the plaintiff's physician said as to the antecedent family history of the patient, would not change this result, and its exclusion was not injurious error. The inspector seemed to have acted only in carrying out the order of the board whose servant he was, and came within the words of the statute exempting officers or agents of the board from suit.

Privilege Once Waived Can Not be Recalled

The Supreme Court of Indiana says, in Pittsburgh, Cincinnati, Chicago and St. Louis Railway Co. vs. O'Conner, a personal injury case brought by the latter party, that there were two trials. On the first trial the surgeon of the railway company, who attended the plaintiff at the hospital to which he had been taken when injured, was called and examined as a witness by the plaintiff, and testified relative to what he learned at the time he was called to see him at the hospital, and concerning his intoxication at that time. On the second trial the railway company called and examined the surgeon as a witness. During his examination, the railway company offered to prove by him, in response to a question propounded to him, that he was called to see the plaintiff at the hospital shortly after his injury, and that he was at that time in a profound state of intoxication. Counsel for the plaintiff objected to the introduction of such evidence on the ground that the surgeon was at the hospital for the purpose of acting in his professional capacity for the plaintiff, and therefore, on the plaintiff's objection, it was a question of privilege with him whether he should permit him to testify or not. This objection was sustained by the trial court, and the evidence excluded. The Supreme Court holds that this was error.

Section 520 of Burns' Annotated Statutes of Indiana of 1908 provides that "the following persons shall not be competent witnesses: . . . Fourth.—Physicians, as to matter communicated to them, as such, by patients, in the course of their professional business, or advice given in such cases." It has been held by this court that the statute confers a privilege, which the patient, for whose benefit this provision is made, may claim or waive. It gives no right to the physician to refuse to testify and creates no absolute incompetency.

This privilege may be waived by the patient or his legal representatives by examining the physician as a witness concerning said privileged communication. When the privilege has once been waived by the patient in this manner, it can not be recalled, and the information is no longer privileged.

Evidence of the intoxication of the plaintiff at the time of the injury complained of was admissible on the question of contributory negligence, and as affecting the weight of his testimony; he having testified in his own behalf concerning said injury.

Not Proper Physical Culture Literature

The United States Circuit Court of Appeals, Third Circuit, says, on the appeal of MacFadden vs. United States, where it affirms a conviction of violating the postal law, that the defendant was convicted on sufficient evidence, after a correct and adequate charge, which was practically all that the court needed to know or say. The story on which the conviction was based, if not the magazine in which it appeared, of which the defendant was the editor in chief and responsible head, was suggestively lewd and bad; none the less so because of the alleged reforming and corrective purpose overlaying it, which was speciously advanced. It plainly, and in the court's judgment intentionally, catered to a prurient taste, which it was the thinly disguised object of the author to incite; and associated, as it was, in the periodical where it appeared with certain articles on physical culture to which no objection perhaps could be made—although no such clean bill could be given to many things, articles as well as advertisements, which were there found—it was capable of doing incalculable harm; all the more so because it was intended to circulate among and attract the young, to whom the magazine was particularly addressed. The court is clear that the publication —story, if not magazine—was of the obscene, lewd and lascivious character which it was the object of Congress by the legislation in question to suppress. The standard was not the publications to which the court was referred, which were said to be just as bad, but pass muster with some. The test was the tendency to deprave and corrupt the minds of those who were open to such influence, into whose hands the publication might come, of the existence of which corrupting tendency the court has no doubt here.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal

February 27

1 *The Cancer Question. J. E. Summers, Omaha.
2 *U. S. Marine Hospital Sanatorium for Tuberculosis at Fort Stanton. P. M. Carrington, Fort Stanton, New Mexico.
3 Case of Thoracic Aneurism. A. D. Eisenberg, Brooklyn.
4 *Treatment of Malignant Growths by Injections of Mercury, Arsenic and Iron. W. L. Harris, Providence, R. I.
5 Submucous Resection of the Nasal Septum. I. W. Voorhees, New York.
6 *Is the Human Body Supplied with an Autoprotective Mechanism? (Concluded.) C. E. deM. Sajous, Philadelphia.
7 Routine Urinary Examinations. H. R. Harrower, Chicago.
8 Substitutes for Enucleation of the Eye. D. F. Harbridge, Philadelphia.

1. Abstracted in THE JOURNAL, Jan. 30, 1909, p. 415.

2. **U. S. Marine Hospital for Tuberculosis.**—In an illustrated article Carrington gives an introductory historical and descriptive sketch of the U. S. Marine Hospital Sanatorium for tuberculosis at Fort Stanton, N. M. He describes the character of cases admitted, housing, prevention of infection, daily routine, rest and exercise, amusements, statistics, industrial features, mortality, and treatment, which last resolves itself into plenty of open air, as complete and satisfying a diet as possible, and rest and graduated exercise with general supervision of the patient's daily life and conduct. No medical treatment offering any noticeable betterment of the results has been found. The physicians there have been unable to secure any results with deep muscular injections of mercury succinimide even remotely approaching those reported by Wright, of the Navy.

4. **Malignant Growths.**—For two and a half years Harris has made it a practice to give every patient he operated on for suspicious or malignant growths a course of injections of iron arsenic and mercury. Breast cases have done particularly well, and the patients have generally recuperated speedily. The treatment should extend over two or three years, and the earlier it is begun the better. For sixty days after operation he injects daily ½ gr. (0.03 gm.) of a soluble iron salt, and 1/24 gr. (0.002) of arsenous acid. Every ten days he gives subcutaneously 2½ gr. (0.16 gm.) mercury salicylate subcutaneously, until 10 grains have been administered. Then ½ or 1 gr. (0.03-.06 gm.) every fifteen or twenty days for the first year. The second year he gives a series of 1 grain doses until 10 grains have been taken, and then ½ grain every month. Lately he has used the succinimide of

mercury subcutaneously in 1/5 grain (0.012 gm.) doses. Iron and arsenic injections are given from time to time, and are found very invigorating.

6. **Autoprotective Mechanism.**—Sajous adduces evidence, physiologic and zoologic, which leads him to the following conclusions:

1. Man, in keeping with many animals lower in the phylogenetic scale, is supplied with an autoprotective mechanism.
2. This mechanism includes: (a) the immunizing center, an organ of special sense annexed to the heat center, both centers being located in the pituitary body; (b) the thyreoparathyroid glands; (c) the adrenals, and (d) special nerves which connect the immunizing center (through the heat center) with these two sets of organs.
3. The immunizing center, which governs the autoprotective mechanism, is the developed "osphradium" or "test organ" described by zoologists in molluscs and certain ancestral vertebrates.
4. While the osphradium of primitive animals tests their respiratory fluid, sea water, its prototype, the immunizing center of higher animals, including man, tests the blood, also a respiratory fluid and a qualitative homologue of sea water.
5. When the functional activity of the immunizing center is increased through the presence in the blood of some toxin, i. e., wastes, toxins or endotoxins, mineral and vegetable poisons, certain venoms, drugs, etc., capable of exciting this center, it stimulates correspondingly the heat center and thus awakens the immunizing process.
6. Fever indicates that the autoprotective mechanism is active. The rise of temperature is due to the increased production of thyreoparathyroid and adrenal secretions and the resultant increment of metabolic activity. The immunizing process is a consequence of this hypermetabolism, all the immunizing agents, plasmatic and cellular, being produced in greater quantities.
7. Absence of fever in a toxemia of any kind is due to inability of the immunizing center to react under the influence of the toxic, owing to deficient sensitiveness (inherited or acquired) of this center, or to the fact that the toxic is itself a paralyzant or anesthetic of its sensory elements.
8. Excess of fever (above 105.5 F.) is due to excessive excitation of the immunizing center and a corresponding overproduction of defensive bodies. This condition exposes the red corpuscles and the endothelial cells to proteolytic destruction (hemolysis and autolysis) along with the pathogenic substances or bacteria.

Medical Record, New York

February 27

9 Claims of Water as a Therapeutic Agent. S. Baruch, New York.
10 Coagulability of the Blood in Pulmonary Tuberculosis. M. Solis-Cohen, Philadelphia, Pa.
11 *Treatment of Patients with Hemiplegia from Cerebral Apoplexy. W. M. Leszynsky, New York.
12 Tuberculosis of the Breast. E. St. Jacques, Montreal, Can.
13 Achylia Gastrica versus Insufficientia Pylori. M. I. Knapp, New York.

11. **Cerebral Apoplexy.**—Leszynsky says that cerebral apoplexy is often the first intimation of an unsuspected chronic nephritis associated with arteriosclerosis. Syphilis is another cause, especially in persons under 35. Other causes are embolic softening, meningeal hemorrhage, tumor formation involving the motor tract, and unilateral lesion in the other cervical region of the spinal cord or cranial traumatism. Hemorrhage may occur anywhere in the brain, but is more common from the lenticulo striate arteries in which miliary aneurisms are apt to develop. Hemorrhage from arterial thrombosis is, in the author's experience, quite as frequent as that due to hemorrhage. Most of the symptoms described in text-books as preliminary to cerebral hemorrhage, are in reality the accompaniment of endarteritis. The exciting causes are excessive emotion, a cold bath, temporary obstruction to the returned circulation from the brain through violent coughing, sneezing, straining at stool, etc. When apoplexy occurs suddenly without loss of consciousness, paralysis is evident. But during coma the diagnosis is frequently difficult. While the patient remains unconscious the prognosis for life is doubtful and death usually occurs if coma continues more than twenty-four hours. Treatment is based on as little disturbance as possible, the patient being in bed with head and chest raised. To relieve stertor turn the body on the paralyzed side and draw the tongue forward. A positive diagnosis should precede treatment. Venesection is indicated with high blood pressure, but not with a small weak frequent pulse and pale face. It is preferable to operate on the non-paralyzed side. An exact differentiation between apoplexy from hemorrhage and from thrombosis or embolism being often impossible, venesection should not be practiced in doubtful cases. Tincture of aconite, two or three drops every half hour, will also lower arterial pressure, but more slowly, or a ligature about the extremities close to the trunk may prove useful. The physician should always satisfy himself by personal observation whether the patient is able to swallow, and not take it on trust from anyone else. Even if the individual can swallow, food should not be forced. If necessary rectal feeding may be resorted to. The author discusses the treatment at considerable length.

Boston Medical and Surgical Journal

February 25

14 Cancer of the Uterus. E. B. Young and J. T. Williams, Boston.
15 *Anterior Metatarsalgia: Its Causes and Its Relief. N. Allison, St. Louis.
16 Nerve Strain in School Children. L. W. Flanders, Dover, N. H.
17 Ethyl Chlorid in General Anesthesia. A. M. Dodge, Boston.

15. **Anterior Metatarsalgia.**—Allison describes the nature and causation of this condition, and says that it is often associated with a high degree of neurasthenia. He recommends a treatment consisting of support and developmental exercises, and describes an appliance which is light, durable, gives firm support where it is needed, and remains constantly in the right spot.

Lancet-Clinic, Cincinnati, Ohio

February 27

18 Cerebral Rheumatism. H. H. Hoppe, Cincinnati.
19 A New Field of Practice in Spirit and Drug Neurosis. T. D. Crothers, Hartford, Conn.
20 Blindness Caused by Ophthalmia Neonatorum. W. S. Keller, Cincinnati.

Medical Fortnightly, St. Louis

February 25

21 Diabetes Mellitus. J. V. Shoemaker, Philadelphia.
22 Treatment of Acute Otitis Media. L. D. Brose, Evansville, Ind.
23 True Basis for Reconstructed Medical Science. J. Clements, Wichita, Kan.

Northwestern Lancet, Minneapolis

February

24 *Accidents and Complications in Goiter Operations. C. H. Mayo, Rochester.
25 Anatomic Treatment of Fracture of the Neck of the Femur After the Method of Maxwell and Ruth. A. Shlmonek, St. Paul.
26 What Can Our Association Accomplish in Business, Educational, Moral and Social Matters? R. G. Warne, Mitchell, S. D.
27 Lateral Curvature of the Spine: Early and Late Cases. A. J. Gillette, St. Paul.
28 A Test for Albumin in the Urine. H. L. Ulrich, Minneapolis.
29 Beck's Bismuth Paste Treatment, with Report of Nine Cases. E. C. Robitshek, Minneapolis.
30 Xeroderma. G. P. Crume, Minneapolis.
31 Morbid Anatomy of the Heart. H. A. Tomlinson, St. Peter, Minn.

24. **Accidents and Complications in Goiter Operations.**—Mayo finds that hemorrhage, with its immediate and secondary consequences, is a serious accident. When secondary, it is usually from muscle inclusion in ligating the inferior thyroid artery. There were 4 deaths in 575 operations for diffuse or encapsulated adenomata, 2 occurring from pneumonia. Seven out of 19 deaths in 410 cases of hyperthyroidism occurred in the first 46 operations for this disease. In this condition the complications of degenerative conditions lead to hyperthyroidism after operation. Preparation, graduated operation, and better technic have reduced this mortality to 4 or 5 per cent. Preservation of the posterior gland capsule tends to preserve the recurrent laryngeal nerves, also the parathyroid bodies. The greatest danger of parathyroid injury is in secondary operations for goiter. Other serious conditions requiring operation which occur with marked Graves' disease may call for preparation or graduated operation as a preliminary procedure.

Virginia Medical Semi-Monthly, Richmond

February 12

32 Recent Advances in Physiology. T. Hough, Charlottesville.
33 The Bronchoscope in the Diagnosis and Treatment of Disease. R. H. Johnston, Baltimore.
34 *Points in Morbid Psychology. F. Peterson, New York.
35 Intestinal Diseases Due to Metazoan Parasites. W. G. Hopkins, Richmond.
36 Fetus Removed from the Abdominal Cavity After Three Years' Standing. E. R. Hart, Suffolk.
37 Suturing in Trachelorrhaphy. J. W. Henson, Richmond.
38 Stricture of the Female Urethra. C. W. Astrop, Surry.
39 Treatment of Incipient Tuberculosis. W. H. Bramblitt, Pulaski.

34. Abstracted in THE JOURNAL, Nov. 7, 1908, p. 1625.

American Journal of Obstetrics and Diseases of Women and Children, York, Pa.

February

40 Evolution in the History and Treatment of Uterine Fibroids. A. Vanderveer, Albany, N. Y.
41 Plea for the More Frequent Performance of Cesarean Section. L. M. Allen, Baltimore.
42 *Best Methods of Promptly Terminating the First Stage of Labor, with Special Reference to Vaginal Cesarean Section. H. D. Fry, Washington, D. C.
43 *An Analysis of Eighty Consecutive Cases of Extrauterine Pregnancy. R. T. Frank, New York City.
44 Prophylactic Treatment of the Physical Results of Surgical Diseases. C. M. Rakestraw, Savannah, Ga.
45 Causes of Death of the Viable Fetus Before Labor. F. A. Dorman, New York.
46 Fetal Mortality During Labor: Its Causes and Prevention. S. Marx, New York.
47 Unusual Results Following Cholecystotomy. E. W. Hedges, Plainfield, N. J.
48 Abdominal Surgery in the Aged. J. G. Sherrill, Louisville, Ky.
49 *Abdominal Surgery Without Detached Pads or Sponges. (Concluded.) H. S. Crossen, St. Louis.
50 Infantile Mortality in Early Life. A. Brothers, New York.
51 Relation of Cyclical Vomiting in Children to Appendicitis. C. G. Cumston, Boston, Mass.

42. Termination of First Stage of Labor.—Fry declares that when dangerous complications threaten or have developed, the safety of the mother demands prompt evacuation of the uterus. In multiparæ, or in primparæ after obliteration of the cervix, manual dilatation accomplishes the result satisfactorily; but on the other hand, with a rigid or intact cervix to deal with, *accouchement forcé* is a serious undertaking. Besides the risk of infection and deep lacerations of the mother's soft parts, her life would be jeopardized by failure to secure prompt delivery in the face of some complication, such as eclampsia or accidental hemorrhage. When prompt or rapid evacuation of the uterus is indicated in the interests of mother or infant, one can now choose between manual dilatation, multiple incisions of the cervix, the Bossi or some instrument dilator, and vaginal Cesarean section. In dilatation, two things must be borne in mind: (1) The obliteration of the cervical canal; (2) the dilatation of the external os. The method employed to complete artificially the first stage of labor must be selected in accordance with one or the other of these conditions. As a rule, manual dilatation and multiple cervical incisions are applicable only after obliteration of the canal; while instrumental dilatation and vaginal Cesarean section are required when the cervix is intact.

43. Extrauterine Pregnancy.—Frank analyzes 80 consecutive cases of extrauterine pregnancy at the Mount Sinai Hospital, the first thirty of which were reported by Brickner in 1905. In the entire series only 12 women had never been previously pregnant, and of these 6 had been married less than one year. Ten had had no pregnancy for more than 4 years preceding their present illness (12.5 per cent.), while 6 (7.5 per cent.) acquired their ectopic gestation during the first six months of marriage. In one case, the tubal pregnancy followed three months after normal labor, in two cases within four months of early abortion. One patient of the series was simultaneously pregnant in the tube and in the uterus. The menstrual history, pain, temperature, pulse, local signs and blood changes are discussed in detail. All but three of the patients were operated on, and in these three there were typical hematoceles. In the series there were ruptures, 42 (right 21, left 21); abortions, 20 (right 12, left 8); hematoceles, 11; unruptured 4; intraligamentous rupture, 1; abdominal, 1; and ectopic with extrauterine pregnancy, 1. Immediate operation was done in 24 cases, 31.2 per cent.; deferred operation in 53 cases, 69.8 per cent. In the three patients with hematocele, treated without operation, the tumor was firmly encapsulated when first seen; in each case it was of moderate size, and caused no symptoms. These three patients eventually regained their health, but the period of confinement to bed was longer than if they had been operated on. There were three deaths in the entire series, a mortality of 2.75 per cent. From his study of this series of cases, Frank reaches the following conclusions:

1. Before all else, the diagnosis must be assured. Patients who give a history suspicious of ectopic pregnancy—spotting, cramp-like pains, fainting, collapse, with or without some of the less certain signs, such as amenorrhea, the accessory symptoms of pregnancy (morning vomiting, increase in size of the breasts, etc.) and in whom the uterus does not show the shape and size corresponding to their supposed period of gravidity, or who have a mass near the uterus, should be consigned to a hospital, or should be kept under the closest observation at their homes.

2. Such patients should never be subjected to forcible examinations, nor should they be curetted, until every possibility of ectopic pregnancy has been definitely excluded.

3. If after two or three days of observation the condition has not definitely improved, and no marked tendency to hematocele formation has developed, laparotomy is indicated. Should severe attacks of pain, fainting or collapse ensue during the period of waiting, operate at once. When a hematocele is still small or ill defined, laparotomy will shorten the period of convalescence. In well-defined hematoceles, vaginal section for evacuation and drainage suffices.

4. If a patient when first seen is in a precarious condition, it is safer to err on the side of early operation than to wait.

5. When a patient is seen in extreme collapse, immediate rapid laparotomy, with subsequent measures to combat both the hemorrhage and the shock, is indicated.

That inexperienced diagnosticians are deceived and fail to distinguish between transitory primary shock and really grave hemorrhage is doubtless true, but Frank would prefer to interfere unnecessarily early rather than too late.

49. Abstracted in THE JOURNAL, Dec. 17, 1908, p. 1355.

Journal of the Arkansas Medical Society, Little Rock

January

52 *Diagnosis of Pelvic Disease and Treatment of Inflammatory and Suppurative Conditions. J. Price, Philadelphia.
53 Pathologic Tonsil and Its Surgical Treatment. M. Duckworth, Pine Bluff.
54 *Appendicostomy in Amebic Dysentery. O. Gray, Little Rock.

52 and 54. Abstracted in THE JOURNAL, July 18, 1908, pp. 249, 250.

Buffalo Medical Journal

February

55 *Prolonged and Tedious Labors and Forceps Deliveries Compared as Causes of Epilepsy, Idiocy and Cerebral Diplegias. J. W. Putnam, Buffalo.
56 Diet in Typhoid. L. H. Levy, Syracuse, N. Y.
57 Some Essentials of Preventive Medicine. I. M. Slingerland, Fayettsville, N. Y.

55. Labor and Epilepsy, Etc.—Putnam reviews the literature with reference to the relation of various mental conditions to prolonged and tedious forceps deliveries. The obstetrician has a more important function than merely bringing a live child into the world. He should so perfect himself in the science of obstetrics that the preventable deformity, idiocies, and epilepsies should be reduced. There are in the United States over 95,000 idiots and more than 123,000 epileptics. Many of these are so afflicted from preventable accidents of birth; in fact, the author claims to have shown by the writings of eminent men in Europe and the United States, that idiocy, epilepsy and cerebral palsies of childhood are due to one of three causes, asphyxia, injuries to the head from forceps, and injuries from prolonged compression.

American Journal of Physiology, Boston

January

58 *The Inhibitory Effect of Magnesium on Some of the Toxic Effects of Eserin. D. R. Joseph, New York.
59 *Prolonged Existence of Adrenalin in the Blood. D. E. Jackson, Bloomington, Ind.
60 *Rôle of Inorganic Phosphorus in the Nutrition of Animals. E. B. Hart, E. V. McCollum and J. G. Fuller, Madison, Wis.
61 *Cause of the Hyperglycæmia Produced by Asphyxia. J. J. R. Macleod, Cleveland, Ohio.
62 *Absorption, Excretion and Destruction of Strophanthin. R. A. Hatcher, New York.
63 Elimination of Total Nitrogen, Urea and Ammonia Following the Administration of Glycocoll, Asparagin and Glycylglycin-Anhydrid. P. A. Levene and P. A. Kober, New York.

58. Inhibitory Effect of Magnesium.—Joseph's experiments show that magnesium salts abolish the tremor caused by eserin, and are of some value as antidotes in eserin poisoning, but have no influence whatever on eserin meiosis.

59. Persistence of Adrenalin in the Blood.—Jackson shows that adrenalin does not persist in the blood after its visible effects in the rise of blood pressure have disappeared, but that the rise of pressure produced in a second dog by the transfusion of blood from a dog injected with adrenalin, when the blood is drawn after the effects of the adrenalin have disappeared, is of a different character from that produced by adrenalin, and depends on some other cause than the presence of adrenalin in the blood. In the dog the adrenalin disappears from the blood in about one minute's time.

60. Inorganic Phosphorus in Nutrition.—Hart, McCollum and Fuller found, by keeping pigs on a ration containing very

little phosphorus, that the organism, when starving for phosphorus, abstracts calcium and phosphorus from the bony skeleton in the proportions found in tri-calcium phosphate, and evidently possesses the power to recombine these elements in the organic forms of phosphorus needed in the nervous system and other parts of the economy. Up to a certain weight, the animals receiving an insufficient supply of phosphorus throve and gained in weight, as well as did animals receiving an abundance of the element. When this weight was reached, loss of weight began, followed by collapse. If the insufficient supply of phosphorus in the diet were supplemented by added phosphorus no bad results occurred, and this deficit could be supplied as well by the inorganic phosphates like calcium phosphate, as by organic phosphates, such as phytin. The phosphorus in the organs of animals on the low phosphorus ration was maintained at a constant proportion, comparable to that of normally fed pigs, but the percentage of ash in the skeleton of such pigs was reduced to nearly one-half that of pigs receiving a normal ration or a phosphorus-poor ration supplemented by an inorganic phosphate.

61. **Experimental Glycosuria.**—Macleod shows that the glycosuria produced by asphyxia and by curare is due to the influence of carbon dioxid, and probably also of acids, in stimulating the liver cells to an increased formation of sugar from the liver glycogen. If the liver be excluded from the circulation the glycosuria disappears and the hyperglycemia is converted into hypoglycemia. The acids which may act on the liver cells probably owe their origin to the deficiency of oxygen in the blood. Curare produces most marked hyperglycemia, which is only partially prevented by careful artificial respiration and oxygen inhalations. The glycosuria produced by asphyxia does not pass off for some time after the cause of the asphyxia has been removed.

62. **Absorption of Strophanthin.**—Hatcher reaches the following conclusions: The absorption of strophanthin is very rapid when more than six times the fatal dose by vein is placed in the ligatured small intestine of the dog. The rapidity of absorption is dependent on the total amount injected into the alimentary canal to a far greater degree than on the total surface of intestine concerned in absorption. It is probable that the smaller the dose of strophanthin that is given by the mouth, the more nearly does excretion keep pace with absorption. This usually prevents toxic symptoms, unless an amount more than equal to five times the fatal dose by vein is given. If an amount equal to ten times the fatal dose by vein is administered, toxic symptoms result. If vomiting and diarrhea are prevented in such a case in the dog (morphin, ligature), death results as a rule. The absorption of strophanthin in man appears to follow a rule similar to that in the dog. Strophanthin is excreted rapidly into the intestine of the rat after being injected subcutaneously. It is excreted more slowly by the rat's kidney. While strophanthin may be destroyed to a limited extent in the alimentary canal, the rate of destruction in the stomach and small intestine of the dog is insufficient to account for the failure of these organs to absorb a toxic dose when moderately large amounts have been injected. Strophanthin can be extracted from the contents of the stomach and small intestine of the dog, and from the whole of the alimentary canal and the tissues of the rat, and the amount be determined by the physiologic test on cats. This test permits of the estimation of amounts of strophanthin which can not be determined by chemical means (one-tenth of a milligram), probably accurate to within about 10 per cent. The oral administration of strophanthin (and of strophanthus) in therapeutics is irrational in the present state of our knowledge concerning absorption and excretion in the alimentary canal, and destruction within the animal organism.

Cleveland Medical Journal

January

64 The Erie Street Medical College Sixty Years Ago. D. H. Beckwith, Cleveland.
65 Ethics of Specialism. R. E. Skeel, Cleveland.
66 Some Diseases of the Jaws, with Illustrative Cases. C. A. Hamann, Cleveland.
67 Peritonitis. C. Graefe, Sandusky, Ohio.

Southern Medical Journal, Nashville, Tenn.

January

68 *Early Diagnosis of Tuberculosis, with Special Reference to the Ocular Reaction of Wolff-Eisner-Calmette. A. E. Thayer, Jacksonville, Fla.
69 *Open-Air Treatment of Surgical Tuberculosis. De F. Willard, Philadelphia.
70 *Tuberculous Arthritis of the Hip Joint. S. H. Weeks, Portland, Me.
71 *Treatment of Tuberculous Hip Disease by Weight-Bearing and Fixation by the Lorenz Short Hip Spica. H. A. Wilson, Philadelphia.
72 *Vaccine Therapy in Hip Joint Tuberculosis. E. H. Ochsner, Chicago.
73 *Retroperitoneal Tuberculous Glands and Their Relation to Spinal Symptoms. C. F. Painter, Boston.

68. **Ocular Tuberculin Reaction.**—Thayer reviews the literature and concludes that in view of the non-specific character of the eye reaction and its possible dangers, it should not be used; and the skin reaction, if employed, should be considered as only one of the symptoms, to be given no exaggerated weight in making the diagnosis, and not to be trusted to the exclusion of other physical data.

69 and 73. Abstracted in THE JOURNAL, Oct. 17, 1908, p. 1363.

70. Abstracted in THE JOURNAL, Oct. 31, 1908, p. 1537.

71 and 72. Abstracted in THE JOURNAL, Nov. 7, 1908, p. 1625.

Journal of the Kansas Medical Society, Kansas City

January

77 Insanity as the World Sees It. C. C. Goddard, Leavenworth, Kan.
78 Should the State Maintain Sanatoria for Tuberculous Patients? J. A. Milligan, Garnett, Kan.
79 *The Goat—Now Laugh. J. E. Minney, Topeka.
80 Treatment of Pneumonia. B. E. McShane, Alton, Kan.
81 Gumma of External Nose; Serous Cyst of the Iris. J. S. Weaver, Kansas City, Mo.
82 Stale Food Products. D. D. Haggard, Phillipsburg, Kan.
83 Hernia. S. Murdock, Sabetha, Kan.

79. **Goat's Milk.**—Minney discusses the use of goat's milk, and arrives at the following conclusions:

1. The goat is freer from disease than the cow, and particularly from tuberculosis, and hence goat's milk is more sanitary than that of the cow.
2. The milk is more nearly like human milk, in the minuteness of its fat globules, and the same in casein.
3. It is more easily digested than cow's milk, and hence is better for infants and invalids.
4. Goat's milk is economical and in reach of the poor, and there are few families that could not afford to keep one or two milk goats, thus solving the infant-food problem and helping to prevent the spread of tuberculosis.

Laryngoscope, St. Louis

January

84 *Relation of Faculty of Hearing to Faculty of Speech. G. Hudson-Makuen, Philadelphia.
85 Functional Paralysis of the Acoustic Nerve. F. G. Stubbs, Chicago.
86 Five Cases of Thrombosis of Lateral Sinus, with Recovery, Bearing on the Diagnosis and Prognosis of This Affection. H. Friedenwald, Baltimore.
87 Postgraduate Instruction in Otolaryngology. G. E. Shambaugh, Chicago.
88 Further Study of Laryngeal Neoplasms in America. J. L. Davis, Philadelphia.
89 Paralysis of Left Vocal Cord Caused by Peritracheal Tumor. W. E. Chenery, Boston.
90 Fatal Operative Case Showing Developmental Absence of Outer Sphenoidal Wall and in Its Place a Large Vein Communicating Directly with the Cavernous Sinus. Autopsy. E. O. Emerson, Boston.
91 Ozena, No Terra Incognita. J. Holinger, Chicago.
92 Hyperkeratosis Linguæ. R. H. Craig, Montreal, Canada.

84. Abstracted in Society Proceedings, THE JOURNAL, Oct. 24, 1908, p. 1456; also published in the *Pennsylvania Medical Journal*, January, 1909.

Old Dominion Journal of Medicine and Surgery, Richmond, Va.

January

93 *Hallucinations of the Insane. C. W. Burr, Philadelphia.
94 Toxic Sanity in a Case of Mastoiditis. F. P. Calhoun, Atlanta, Ga.

95 Phases of Tuberculosis Important to the Public. C. T. St. Clair, Tazewell, Va.
96 Treatment of Cancer. H. B. Stone, Charlottesville, Va.
97 Hernia and Its Treatment. M. Willis, Richmond, Va.
98 Herpes Gestationis: Report of a Case. C. J. Andrews, Norfolk, Va.
99 Extrauterine Pregnancy. S. Lile, Lynchburg, Va.
100 Extrauterine Pregnancy—The Deferred Operation. E. T. Hargrave, Norfolk, Va.

93. **Hallucinations of the Insane.**—Burr enumerates the various forms of hallucination encountered in the insane and briefly describes each. He states that the question sometimes arises: Is a person alleged to be insane and with hallucinations really ill or malingering? There is no short and easy way to determine the matter. If a man says that he hears voices or sees spirits, it is impossible to disprove his statements, but clinically we know that there are always other symptoms associated with hallucinations in the insane, and the diagnosis of fraud or illness must depend on the presence or absence of these symptoms. In other words, the question to be answered is: Do the patient's conduct, manner and behavior correspond with those of persons suffering from hallucinations?

Military Surgeon, Richmond

January

101 Military Sanitary Problems in the Philippine Islands. L. M. Maus, U. S. Army.
102 Battleship Neurasthenia. S. G. Evans, U. S. Army.
103 Hygienic Maxims for the Soldier in Camp and Field. J. K. Weaver, National Guard, Pa.
104 Medical Versus Surgical Treatment of Amebic Dysentery. J. M. Holt, Brooklyn, N. Y.
105 Dry Earth Closets for Field Use. G. F. Campbell, U. S. Army.

American Medicine, Burlington, Vt.

January

106 Latent Malignant Disease of the Stomach. H. Stern, New York.
107 Abuse of Medical Charity and a Remedy. M. O. Magid, New York.
108 •When Shall We Operate for Intra-Abdominal Hemorrhage Due to Tubal Pregnancy. M. Rabinovitz, New York.
109 Is Food Containing Sulphites Injurious to Health? E. E. Smith, New York.
110 Question of a Relationship Between "Syphilitic" Llamas, of the Department of Puno, Peru, and Pre-Columbian Syphilis in Man. A. S. Ashmead, New York.
111 Unusual Seat of Angioneurotic Edema. A. Gordon, Philadelphia.
112 Diagnosis and Treatment of Toxemias of Pregnancy. W. H. Kahrs, New York.

108. **Operation for Intra-abdominal Hemorrhage in Tubal Pregnancy.**—Rabinovitz discusses this subject and insists that in all cases of internal hemorrhage due to ruptured tubal pregnancy or abortion, operation should be done immediately, quickly and thoroughly.

Washington Medical Annals

January

113 Journalistic Suggestions for Medical Writers. L. Eliot, Washington.
114 Eczema in Children. T. N. McLaughlin, Washington.
115 Gallstones; Analysis of Sixty-one Cases. D. S. Lamb, Washington.
116 Tuberculous Obstruction of the Bowel. J. R. Wellington, Washington.
117 Staphylococcus Cystitis with Report of a Case Due to *Staphylococcus Pyogenes Albus* Associated with *Staphylococcus Citreus*. W. M. Barton and R. A. Hamilton, Washington.
118 •Evils of High Board Fences in Relation to Clean Back Yards. W. H. Atkinson, Washington.

118. **Board Fences and Back Yards.**—Atkinson, in writing about the board fences which enclose the back yards of so many houses in Washington, condemns them on esthetic, sanitary and bacteriologic grounds. He would do away with back-yard fences altogether, but if protection is needed it should be of iron or wire. These do not decay, with foul odor and slimy moss. Iron rust is not unhealthy; properly constructed, an iron fence is strong and durable, hides no criminal, covers up no filth, shuts out but a thread of sunshine, leaves an abundance of space for free circulation of air, and prevents eddies of dead and foul air. All these properties stimulate the growth of a vigorous and healthy vegetation. Atkinson therefore appeals to the commissioners and their building inspectors that all fences shall be of iron or wire, with iron posts and concrete base; all back steps of the same material; walks of concrete; and that all out-houses and sheds be built of iron sheeting, brick, stone, terra cotta or concrete, and that each shed or out-house be detached.

American Journal of Public Hygiene, Boston

November

119 •National Department of Public Health. R. H. Lewis, Raleigh, N. C.
120 Improvement of the Municipal Sanitary Inspection Service. H. Mitchell, Asbury Park, N. J.
121 The Rural Health Officer. C. A. Hodgetts, Toronto, Ont.

119. Abstracted in THE JOURNAL, Sept. 12, 1908, p. 940.

New Orleans Medical and Surgical Journal

January

122 •Malarial Blindness: With Report of Six Cases. T. S. Davis, Blooming Grove, Tex.
123 Low Tracheotomy for Foreign Bodies in the Trachea and Esophageal Conditions Resembling Tracheal Obstruction. J. D. Bloom, New Orleans.
124 Multiple Pregnancy, History and Treatment of Unusual Termination. E. S. Matthews, Bunkie, La.
125 Traumatic Tetanus. E. M. Dupaquier, New Orleans.
126 Skin Diseases of the Human Race Carried or Transmitted by Insects. M. C. Brady, New Orleans.
127 Arteriovenous Aneurism of Profunda Femoris, Operation by Matas Method. H. B. Gessner, New Orleans.
128 Demonstration of Advantages of Surgical Engine in Bone Work. W. M. Perkins, New Orleans.
129 Case of Volkmann's Ischemic Paralysis. C. W. Allen, New Orleans.
130 Loewy's Test for Insufficiency of the Pancreas. J. A. Storck, New Orleans.
131 Otogenous Intracranial Complications in Children. H. Dupuy, New Orleans.
132 •Spinal Analgesia in Genitourinary and Rectal Surgery. C. Chassaignac, New Orleans.
133 •Arteriosclerosis and Nephritis. F. Watson, New Orleans.
134 Treatment of Nephritis. J. B. Elliott, New Orleans.
135 Nervous and Mental Symptoms of Nephritis. R. M. Van Wart, New Orleans.

122. **Malarial Blindness.**—Davis says that the estivo-autumnal parasite is the one which produces malarial blindness, and its tertian form is the one most frequently present. It is not necessary for the malarial cachexia to exist for the blindness to occur. The blindness may be transient and disappear as the fever goes down, or it may become permanent through atrophy of the optic nerve. The blindness may be produced by an optic neuritis, a retinal hemorrhage, hemorrhage into the vitreous, effusion into the vitreous or by a retinochorioiditis. The diagnosis is rapidly made by blood examination and the ophthalmoscope. The condition is really differentiated from quinin amaurosis by the fact that in the latter there is grave ischemia, while in the malarial affection there is great congestion of the papilla. The prognosis is good. Quinin is best given hypodermatically.

132. **Spinal Analgesia.**—Chassaignac, after four years' additional observation and 650 cases, repeats his conclusions of 1904 that spinal analgesia will neither displace any other method nor die out. It has its proper place, and its own indications and contraindications.

133. **Arteriosclerosis and Nephritis.**—Watson's observations lead him to conclude that a patient, giving the history of one or more of the etiologic factors of arteriosclerosis, who presents on physical examination a hypertrophy of the heart—heart sounds loud and clear at apex and base and an accentuated ringing aortic sound, thickened radial, brachial and temporal arteries, high tension pulse, normal or diminished amount of highly colored urine of normal or high specific gravity, with a variable amount of albumin and with or without hyalin casts—is suffering from a condition primarily arterial, to which the kidney changes are secondary. This is by far the most common clinical picture, according to his observation. The diagnosis should be arteriosclerosis—the prognosis being based on the cardiovascular system: The albumin is no more than an indication that the arteries and glomeruli of the kidney are affected in the general change. The patient if seen early can be greatly helped—can be given years of comfort. The prognosis is much better than for primary chronic interstitial nephritis. The latter condition would show a large amount of pale urine of low specific gravity, a variable amount of albumin and hyalin—possibly granular—casts, and on physical examination a hypertrophied heart, with more or less thickening of the arteries, greatly increased blood pressure and albuminuric retinitis. In the later stages the two conditions are approximately the same

clinically and can be differentiated only on the early history. Here, however, the separation of the conditions is not important for either prognostic or therapeutic reasons.

New York State Journal of Medicine, New York

January

136 Diagnosis of Certain Chronic Abdominal Conditions. W. C. Wood, Brooklyn.
137 *Intermittent Claudication. H. C. Gordinier, New York.
138 Technic of Skin Grafting. E. MacD. Stanton, Schenectady.
139 Chylous Ascites in an Infant Sixteen Days Old. Le G. Kerr, Brooklyn.
140 Artificial Hyperemia in Pulmonary Tuberculosis, with Special Reference to the Kuhn Mask. F. E. Beal, New York.

137. **Intermittent Claudication.**—Gordinier discusses the etiology and pathology of this condition. He says that there are five clinical characteristics which stamp intermittent claudication as a perfect clinical entity and which also serve to make the diagnosis of it very clear. In order of their import, they are as follows: (1) The intermittent character of the symptoms; (2) the absence of the symptoms while the limbs are at rest; (3) the development of painful limping on exertion; (4) the disappearance of all symptoms after a period of rest, to be repeated again on extension; (5) the absence in most cases, especially during the attack, of pulsation of the posterior tibial and dorsalis pedis arteries. The prognosis is usually unfavorable, though some cases improve. He sums up the treatment as follows: Restriction of exercise short of bringing on the attack, or absolute rest in bed; saline baths, gentle massage and electricity, particularly the D'Arsonval current, which relieves pain and produces vasomotor dilatation; vasomotor dilators, especially nitroglycerin and sodium nitrite, together with small doses of potassium or sodium nitrite and general tonics, particularly the glycerophosphates, arsenic and strychnin. Tobacco and alcoholic stimulants should be prohibited. The condition of flat-foot should be carefully corrected; if a syphilitic infection is suspected a systematic and thorough course of mercury and the iodids should be given.

Atlanta Journal Record of Medicine

January

141 Results of Vaccine Therapy in Acute and Chronic Infections. J. F. Paullin, Atlanta, Ga.
142 Complications of Gonorrhea in Women. F. G. Hodgson, Atlanta, Ga.
143 Tuberculosis. G. Brown, Atlanta, Ga.
144 Adenoids. R. B. Ridley, Atlanta, Ga.
145 Hunger and Thirst, and Some More of That Sort. C. A. F. Lindmore, Atlanta, Ga.

University of Pennsylvania Medical Bulletin, Philadelphia

February

146 Two Cases of Relapsing Fever. J. W. Hunter and T. A. Cope, Philadelphia.
147 The Occurrence of a Ciliate (Opalinopsis Nucleobata, N. S.) in the Liver of a Mammal (Canis Latrans). A. J. Smith and H. Fox, Philadelphia.
148 *The Standardization of Ergot. H. C. Wood and C. A. Hofer, Philadelphia.
149 Pseudodiphtheritic Septicemia, with Report of a Case Diagnosticated by Blood Culture. G. I. MacLeod and F. H. Klaer, Philadelphia.

148. **Standardization of Ergot.**—Wood and Hofer describe a simple method for estimating the comparative power of different specimens of ergot, and discuss the value of the circulatory changes as an indicator of the quality of ergot. They describe the results of a number of tests of fluid extracts of ergot obtained from representative manufacturers, with the result that only two out of eleven samples were found to be active. The authors point out the mistake of the general idea that fluid extract of ergot is a stable preparation; in point of fact it deteriorates very rapidly.

Maryland Medical Journal, Baltimore

February

150 Some Esophageal Cases. R. H. Johnston, Baltimore.
151 Physiologic and Therapeutic Influence of the Mind on the Body. W. E. Magruder, Sandy Spring, Md.

Journal of Nervous and Mental Diseases, New York

February

152 *Facial Paralysis: A Study of 335 Cases. G. A. Waterman, Boston, Mass.
153 *Course of Sensory Impulses in the Spinal Cord. C. D. Camp, Ann Arbor, Mich.

152 and 153. Abstracted in THE JOURNAL, July 11, 1908, pp. 163, 164.

Louisville Monthly Journal of Medicine and Surgery

February

154 *Causation and Treatment of Infantile Convulsions. E. W. Saunders, St. Louis.
155 Case Reports: Calculus of Kidney; Pyonephrosis. L. Frank, Louisville.
156 Weak Feet. J. B. Richardson, Louisville, Ky.

154. Published in the *Interstate Medical Journal*, January, 1909, and the *Lancet-Clinic* for Feb. 6, 1909; abstracted in THE JOURNAL, Feb. 27, 1909, p. 731.

Mississippi Medical Monthly, Vicksburg

February

157 Bright's Disease. S. W. Glass, Dublin, Miss.
158 Honesty. C. M. Shaw, Robinsonville, Miss.
159 *Conservative Use of Forceps: Indications and Contraindications. J. A. Rowan, Wesson, Miss.

159. **The Forceps.**—Rowan aptly contrasts the extreme practices of the dilatory "Dr. Lookwise" and the officious "Dr. Smart Alec," and then lays down clearly the rational indications for the use of the forceps. The physician should first be thoroughly satisfied that the woman is unable by her own natural forces to effect the expulsion of the child. In the second place, he should be satisfied with the existence of some condition involving the danger to either mother or child, unless delivery is rapidly accomplished. Those affecting the mother are eclampsia, actual or threatened, inadequately compensated heart lesion, hemorrhage from premature separation of the placenta, acute edema of the lungs, and exhaustion. Of this last condition the physician must be his own judge. Patients and friends will often insist on exhaustion, when the woman has strength enough to deliver three or four babies. The feebleness of the pulse is the best indication. Regarding the child, premature separation of the placenta, prolapse of the umbilical cord, undue pressure on the head, and a fetal heart beat below 100 or above 160 are indications. Among contraindications he mentions a hydrocephalic head and a decomposing fetus, in which cases the forceps is almost sure to slip and possibly injure the mother; and a perforated head, which can be better managed with a cephalotribe. Before applying the forceps it is well definitely to ascertain that the pelvic canal is not too small, and that there are no serious mechanical obstructions. Forceps should not be applied until the presenting part has become engaged.

Northwest Medicine, Seattle, Wash.

February

160 *Intestinal Putrefaction and Its Relation to Indicanuria. R. W. Matson, Portland, Ore.
161 Examination of the Stool, and its Clinical Significance. N. W. Jones, Portland, Ore.
162 Injuries to the Eye and Adnexa. H. V. Wurdemann, Seattle, Wash.
163 Measurement of the X-Ray. H. Power, Spokane, Wash.
164 "Too Damned Good." W. W. Potter, Spokane, Wash.

160. Abstracted in THE JOURNAL, Nov. 7, 1908, p. 1636.

Bulletin Johns Hopkins Hospital, Baltimore

February

165 An Appendix Abscess in a 27-months' Child: with an Analysis of Infantile Appendicitis in the Johns Hopkins Hospital. J. W. Churchman, Baltimore.
166 *Relation of Bovine to Human Tuberculosis. W. L. Moss, Baltimore.
167 Dr. Adam Thomson, the Originator of the American Method of Inoculation for Smallpox. H. L. Smith, Baltimore.

166. **Relation of Bovine to Human Tuberculosis.**—Moss reviews this subject exhaustively both from the clinical and the autopsy point of view, and draws the following conclusions.

1. The clinical cases collected in this paper, in which the circumstantial evidence points more or less strongly to human beings having been infected with tuberculosis from bovine sources, can not be presented as furnishing absolute proof of the question, but they point so strongly to tuberculous cattle as a source of danger to man that, with such evidence alone before us, it would seem advisable to take strict precautions against bovine tuberculosis.

2. The economic losses among the cattle themselves, aside from any possible danger to man, are sufficiently great to demand a vigorous effort to stamp out bovine tuberculosis.

3. The evidence furnished at autopsy statistics of primary intestinal tuberculosis, reported by different observers, is very conflicting,

and, even if there were agreement on a high incidence, this evidence could only be taken as circumstantial, since there is abundant opportunity for primary intestinal infection to occur with tuberculous material of human origin.

4. The use of tuberculins from human and bovine bacilli has not yet thrown much light on the question. The agglutination reaction does not serve to differentiate the two types of bacilli.

5. It seems definitely established that there are two distinct types of tubercle bacilli; the human and the bovine type, which, in a majority of cases investigated, have characteristics sufficiently fixed so that mutation from one type into the other does not occur.

6. The bovine type of bacillus has been demonstrated in 20 per cent. of a series of 306 cases among human beings.

7. The bacillus which causes bovine tuberculosis may also cause tuberculosis in man. It must be borne in mind that every case of tuberculosis in man showing the bovine bacillus need not have received the infection directly from cattle, for it is easily conceivable that a human being having become infected from cattle may pass the infection on to other human beings.

8. The dangers from bovine tuberculosis to man are sufficiently great to warrant strict precautions against it.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

February 13

1 Signs of Early Disease of the Thyroid. G. R. Murray.
2 Nature and Treatment of Parenchymatous Goiter. F. L. Greaves.
3 Pulmonary Tuberculosis in Children. M. H. Williams.
4 *Iodin in Surgical Tuberculosis. W. A. Tatchell.
5 Control of Infectious Diseases In and Out of the Schools. A. D. Edwards.
6 *Medical Aspect of Dentistry and the Necessity of Dental Instruction for Medical Students. H. P. Pickerill.
7 *Feeding Trial in Relation to "Epidemic Enteritis." E. P. Minett.
8 *Can Opsonic Estimation Be Relied on in Practice? E. C. Hort.

4. **Iodin in Tuberculosis.**—Tatchell says that the most common disease in China is tuberculosis of joints, bones, glands and skin. He has found that after operative treatment the application of iodin liniment has a remarkable effect, and he selects one case of excision of the elbow as an illustration. After operating or scraping, the cavity is thoroughly swabbed with iodin liniment (B. P.). A piece of absorbent cotton twisted around the end of a probe forms a good swab, and can be graduated according to the size of the sinus. The liniment is applied every day. The application does not cause pain, except a momentary sensation when applied to some surfaces; neither does it destroy tissues, as does pure carbolic acid. Granulations do not become excessive. At the first application he inserts a thin piece of gauze or packs lightly, but never at subsequent dressings. Gauze plugs and strips for drainage have undoubtedly been responsible for many chronic sinuses. From the first he gives a mixture internally containing syrup of iodid of iron, 1 dram, and potassium iodid, 5 grains, three times a day.

6. **Dentistry.**—Pickerill discusses the various lesions due to reflex irritation of the teeth—epilepsy, neuralgia, spurious tetanus, cardiac irregularity, the association of dental with pelvic troubles and ear and eye disorders, local cellulitis, and various growths, etc. He discusses the bacteriology of the teeth, and says that in the past, both in dentistry and medicine, there has been too great a tendency to regard the teeth as isolated parts of an organism, existing of themselves and for themselves. Efficient mastication is the best stimulus for gastric and salivary secretion, and it depends on the absence of dental caries. It must be recognized that the teeth are an integral and inseparable part of the alimentary system, physiologically and pathologically. Abdominal surgeons are complaining of a something at work lowering the resistance of the alimentary tract, and this "something," Pickerill holds, is to be found in the enormous strain thrown on it by the constant ingestion of improperly masticated food, incorporated with more or less virulent organisms, toxins and pus from diseased teeth, and also because of the avoidance of hard food, in part secondary to the tenderness of the diseased teeth. The intestines become atonic, having to deal only with non-fibrous, easily digestible substances, and thus become an easy prey to micro-organisms. Dental caries is largely due to errors of diet commencing before birth and extending over the first twelve years of a child's life. Pickerill would have the medical student have a knowledge of what diet is beneficial and what deleterious to the teeth; for what is best for the teeth is best for the rest of the alimentary system. The physician should be able to write prescriptions for mouth washes, dentifrices, etc., suited to various conditions of the mouth, and to instruct parents in the care of children's teeth. He should know the value of a tooth—when it can be safely lost and when it must be saved; the mere extraction of one tooth will often ruin a patient's articulation. He should be able to recognize the difference between dental myelitis, periodontitis and alveolar abscess, and to relieve the pain of each of them without extracting, should this be necessary. In fact, every medical student should have some dental training, and Pickerill would like to see the converse true, namely, that every dentist should possess a medical qualification. A physician should also recognize the effect of measles, scarlet fever, rickets and syphilis on the teeth, and should know something of the treatment of fractures of the jaws by interdental methods.

7. **"Epidemic Enteritis."**—Minett describes a process of preparing dried milk and a trial of its use during the summer season among infants collected from the out-patient departments of Guy's Hospital, the Royal Waterloo Hospital for Children, and the Surrey Dispensary. The trial lasted nineteen weeks, during which 38 infants were supplied with the food gratis, and fed solely on it. Of the 5 cases of diarrhea that occurred, 2 children were already suffering from it when first seen; 2 cases occurred when the infants had run out of food, and for various reasons were fed with other products. One case occurred in an infant fed on dried milk solely from start to finish; it lasted only two days, and no organisms usually associated with epidemic enteritis could be demonstrated. The author is of opinion that dried milk is deserving a further trial during the summer months.

8. **Opsonic Estimation.**—After an extensive trial of over three years of the opsonic index for diagnosis, prognosis and treatment in tuberculosis, Hort can not regard it as a safe guide, he asserts, even when estimated by acknowledged masters of the opsonic art. He reports a series of observations in support of this view.

Lancet, London

February 13

9 *Psychology and Psychogenesis of Hysteria and the Rôle of the Sympathetic System. T. D. Savill.
10 *Clinical Value of Hemomanometer Observations. W. Russell.
11 *Etiology of Beriberi. H. Fraser and A. T. Stanton.
12 Interesting Case of Multiple Retroperitoneal Hydatid Cysts. F. C. Madden.
13 Anatomic Varieties and Their Bearing on the Treatment of Pathologic Conditions of the Palatine Tonsils. G. S. Bett.
14 Etiology of the Psoriatic and Allied Conditions. M. J. Chevers.
15 Transposition of Viscera Occurring in Brothers. L. Lowenthal.
16 Spontaneous Pulsating Exophthalmos. B. Hird and W. F. Haslam.
17 An Unusual Case of Appendicitis. F. J. Smith.
18 A Case of "Leather Bottle" Stomach. J. L. Stretton.
19 Food of Elementary School Children. A. H. Gerrard.

9. **Hysteria.**—Savill discusses the psychology of hysteria under the following headings: (1) The attributes of the hysterical mind; (2) the psychogenic explanation of hysterical disorders put forward by several eminent psychologists; (3) the rôle of psychogenesis in hysterical disorders and its limitations; (4) the rôle of the sympathetic system. Freud's view as to the almost universality of an underlying sexual basis does not accord with Savill's experience, now somewhat considerable, of these neuroses. He has seen scores of neurasthenics and hysterics whose sexual life history and constitution were absolutely normal. In any case he regards it as hazardous, harmful and wholly unjustifiable for any medical person, and particularly for one of the opposite sex, to make investigations into the dead memories of a sexual past and to call them into a state of activity. As to the various hypotheses explanatory of hysteria, he fails to see how any single explanation or hypothesis, whether psychic, physical or vasomotor, can apply to all the varied and manifold manifestations of hysteria. He is convinced, however, that the supreme importance of the rôle played by the vasomotor sys-

tem has been overlooked, and that in the majority of cases the hysterical lesion is vasomotor.

10. **The Hemomanometer.**—Russell discusses the nature of the arterial movements, and insists on the following factor, which he holds has been practically overlooked, that the arteries contract and relax in response to the composition of the blood—that is, to the direct influence on the vessel wall of various substances present in the blood. We know this to be the case with certain drugs, and it is only a reasonable inference that other contents of the blood have a like effect. He describes Oliver's hemomanometer and discusses the many types of cases in which observations made by the finger in regard to the blood pressure, plus hemomanometer observations, become of value—the neurasthenic type, the asthmatic type, the cardiac type, the digestive type, the renal type, and the cerebral type. The hemomanometer is of clinical value, in Russell's opinion, as giving a record of the contraction and relaxation of the arterial wall, rather than of the blood pressure.

11. **Beriberi.**—Fraser and Stanton report details of a study from the Institute for Medical Research at Kula Lumpur, Federated Malay States, into the etiology of beriberi. The general results lend support to the view that this disease has, if not its origin in, at least an intimate relationship with, the consumption of white rice, and that further research along these lines is justified.

Medical Press and Circular, London

February 10

20 Intussusception. D. Kennedy.
21 Recent Work on Immunity, Especially in Relation to Diagnosis and Treatment. R. Muir.
22 Aural Complications of Influenza and Their Treatment. H. F. Mole.
23 Physiologic Importance of the Prostate. C. Posner.

Clinical Journal, London

February 10

24 *Aphasia. G. Rankin.
25 Treatment of Displacement of the Abdominal Organs. W. Sheen.
26 Laparotomy for Acute Perforations. G. Watson.

24. **Aphasia.**—Rankin gives a remarkably clear description of the varieties of aphasia, and their causation and differentiation, understandable even by those with a very limited knowledge of the central nervous system. He urges the adoption of Bastian's suggestion, that the term "aphasia" be restricted to defects of speech produced by lesions in Broca's convolution; "aphemia" to those produced by subcortial lesions in the pyramidal fibers; and "amnesia" to those produced in the auditory and visual word centers and in the commissures by which these are connected with one another and with corresponding centers in the opposite hemispheres.

British Journal of Children's Diseases, London

January

27 Two Cases of Tuberculous Appendicitis. J. Allan.
28 *Relation of Dental Disorders to Tuberculosis. F. Morley.
29 Acute Lymphatic Leukemia. C. Johnson.
30 Case of Hydronephrosis. G. Carpenter.
31 Two Cases of Tetanus Neonatorum. G. Carpenter.

28. **Dental Disorders and Tuberculosis.**—Morley insists that a septic mouth is a predisposing cause of tubercle. It is well known that mouth breathing is a contributary cause of phthisis, but not so well known that mouth breathing is often due to dental causes, and that adenoids do not account for every case. Very frequently, enlargement of the cervical glands, the most common cause of which is bad teeth, is probably at first simply inflammatory, becoming tuberculous by infection later. Such infections may certainly travel by way of carious teeth, though it is not suggested that this is the most common route. A septic root, even if painless, should never be allowed to remain in a child's mouth. The author thinks that dentists have become too conservative in their attempts to save carious teeth, by sacrificing practical to cosmetic considerations. He particularly insists that before sending children to sanatoria their mouths should be put into good order. Failing that, each sanatorium should possess a dental surgeon whose post would be no sinecure.

Indian Medical Gazette, Calcutta

January

32 The Legend of Gabriel Boughton. D. G. Crawford.
33 John Woodall, Surgeon-General. W. Foster.
34 *Are "Seven Day Fever" and "Three Day Fever" Forms of Dengue? J. W. D. Megaw.
35 Case of Atropin Poisoning. G. D. Franklin.

34. **Seven-Day Fever and Three-Day Fever.**—Megaw considers these two forms of fever, described, respectively, by Rogers and McCarrison, and discusses the question of their identity with dengue, which he considers provable.

Glasgow Medical Journal

January

36 "Verruga Peruana." J. W. Allan.
37 Intestinal Obstruction in the New-Born: Strangulation Through a Hole in the Mesentery. H. Rutherford.
38 Cerebral Physiology and the Education of Abnormal Children. J. K. Love.
39 Case of Peripheral Neuritis, in Which the Diaphragm Was Paralyzed for Three Months. J. Cowan and R. S. McKim.
40 Landry's Paralysis. J. Cowan, A. J. Ballantyne and D. MacDonald.

Dublin Journal of Medical Science

February

41 Suggestion for a Three Weeks' Holiday. J. Burgess.
42 Present-Day Diagnosis, Treatment and Prognosis of Syphilis. J. J. Abraham.
43 Hand Sterilization. (Continued.) C. G. Cumston.

Journal Laryngology, Rhinology and Otology, London

February

44 Labyrinthine Nystagmus: An Analytic Review of Dr. Robert Barany's "Physiologie und Pathologie des Bogengang-Apparates Beim Menschen." D. McKenzie.
45 Spontaneous Discharge of Cerebrospinal Fluid from the Ear. G. F. Cott.
46 Treatment of Acute Catarrh of the Nose. R. Spira.

Annales de Dermatologie et de Syphiligraphie, Paris

January, X, No. I, pp. 1-80

47 Crude Coal Tar in Dermatology. (Le goudron de houille brut en dermatologie.) L. Brocq.
48 Treatment of Eczema with Coal Tar. A. Jambon.

Annales de Gynécologie et d'Obstétrique, Paris

January, XXXVI, No. VI, pp. 1-64

49 Tarnier, 1828-1897. A. Pinard.
50 Prolapse of the Umbilical Cord, with Deformity of the Pelvis as Indications for Cesarean Section. (Procidence du cordon et viciations pelviennes, indications de l'opération césarienne.) A. Couvelaire.

Annales de Médecine et Chirurgie Infantiles, Paris

January 15, XIII, No. 2, pp. 37-72

51 *Development of Children in Weight and Height. (Evolution du poids et de la taille chez l'enfant.) E. Gaujoux.
52 Influence of Environment on Gastrointestinal Infections in Infants. (Influence du milieu sur les infections gastro-intestinales du nourrisson.) P. Hutinel.
53 Mercurial Treatment of Infants. (Mode d'administration et la pesologie du mercure chez le nouveau-né et le nourrisson.) E. Lesné.

51. **Development of Children in Weight and Height.**—Gaujoux declares that the scales are the thermometer for the nutrition of the child, and that it is just as important to keep an oversight of the child's development in weight after the age of 2 as during infancy. The record of the weight will give accurate information in regard to the child's normal development or lack of it, even when nothing else points to anything wrong. The height is also extremely important. Both weight and height increase under normal conditions according to fixed laws, and he summarizes these laws as follows, giving a number of detailed tables for the different years between birth and puberty. Weight: The child triples its weight at birth by the end of the first year; doubles this by the end of the seventh year; doubles this by the end of the thirteenth year. A child that weighs 3 kilos at birth should weigh 9 kilos at the close of the first year and should increase by as many times 1,500 or 1,750 gm. as it is years old up to the age of 7. After 7 it should increase by as many times 2,500 to 2,750 gm. as it is years past 7, up to age of 14. Height: The height should average at the end of the first year a half more than at birth; should double the size at birth between the ages of 4 and 6, and triple it between 13 and 15. After the age of 5 the child should grow by adding to its height at this age as many times 0.06 cm. as it is years past 5. These

averages refer of course to French children, but the laws of growth are about the same everywhere as he shows by comparison of German figures.

Archives Générales de Médecine, Paris

January, LXXXIX, No. 1, pp.1-64

54 *Physiologic Respiratory Exercises in Serofibrinous Pleurisy. G. Rosenthal.

54. **Physiologic Respiratory Exercises in Pleurisy.**—Rosenthal gives the details of nineteen cases of primary tuberculous pleurisy in which great benefit was derived from respiratory exercises. They are a powerful means of influencing both the acute phase and convalescence of serofibrinous pleurisy, while entirely harmless if done cautiously, testing the susceptibility of the patient and sparing the lungs. The exercises should be unilateral, progressive, diaphragmatic, etc., supplementing the ordinary measures during the acute phase, and beginning with 5 or 10 respirations through the nose, with the patient reclining. The active dose is from 40 to 60 respirations in series of 10. During convalescence these exercises can be repeated from 3 to 7 times a week, with from 60 to 200 respirations in from 6 to 20 separate series. These exercises counteract the tendency to adhesion of the pleura and to chronic pneumonia and local sclerosis. If supervised and kept up, the patients do not develop pulmonary tuberculosis later. The chest measure soon shows the benefit derived.

Archives des Maladies du Cœur, Etc., Paris

January, II, No. 1, pp. 1-64

55 Present Status of Question of Blood Plates. (Plaquettes sanguines.) P. Pagniez.
56 Congenital Cardiac Affection with Intense Secondary Polycythemia and Orthostatic Albuminuria. F. Parkes Weber.

Bulletin de l'Académie de Médecine, Paris

February 2, LXXIII, No. 5, pp. 171-202

57 Rhizomelic Spondylosis with Tabes. F. Raymond.
58 Arsenical Insecticides in Agriculture.
59 Mortality from Tuberculosis. Armaingaud.
60 *Sulphur Disinfection of Ships. (Un procédé pratique et économique de sulfuration des navires.) A. Chantemesse and F. Borel.

60. **Practical and Economical Sulphur Disinfection of Ships.**—Chantemesse and Borel have devised a portable apparatus for thorough sulphur disinfection of the largest ships in the course of two or three hours. It utilizes a steam motor and a sulphur burner such as is used in the manufacture of sodium bisulphite, etc. The apparatus generates sulphur dioxid and a supply of the liquefied gas can be produced beforehand so that the reservoir will be full when the apparatus is transferred to the vessel, the motor then serving to propel the gas on hand, besides generating new.

Presse Médicale, Paris

January 27, XVII, No. 8, pp. 65-72

61 Transplantation of Vein in Autoplastic Operation on Urethra. (Transplantation veineuse pour l'autoplastie de l'urètre.) J. Tanton.
62 Results of Lightning Treatment of Cancer. (Courants de haute fréquence et action onioplasique.) A. Zimmern.
63 *Writer's Cramp. (Le spasme fonctionnel.) Lanel.

January 30, No. 9, pp. 13-80

64 Histologic Study of Tongue Affections. (La biopsie dans les affections de la langue.) M. Letulle.
65 *Wire "Central Circling" in Treatment of Comminuted Fracture of Leg. (Le cerclage central appliqué aux fractures comminutives de l'extrémité supérieure des os de la jambe.) P. Algave.
66 Retrogression of Sarcoma of Gum Under Radium. Dominici and Faure-Beaulieu.

February 3, No. 10, pp. 81-88

67 Intestinal Hemorrhage After Appendicectomy. Guibé.

February 6, No. 11, pp. 89-96

68 Dietetic Considerations in Diabetics with Obesity and Acetonemia. L. Landouzy.
69 The Cammidge Reaction and Its Relation to Pancreatic Affections. H. Labbé.
70 Apparatus for Measuring Permeability of Nasal Passages. (Atmorhinometer.) Robert-Foy.

63. **Writer's Cramp.**—Lanel has had the best results from treatment with massage and vibrations in superheated air, followed by re-education to a better method of holding the arm and hand, sparing the muscles from over-exertion. He reports two cases in detail out of a much larger experience to emphasize the advantage of this combination of vibratory treatment and massage in superheated air.

65. **Wire Circle to Hold Comminuted Fractures.**—Alglave gives an illustrated description of his method of running a wire through the different parts of the fractured upper end of the bones of the leg. In a case described almost perfect functional results were obtained. The measure is applied as soon as possible after the fracture. The focus is exposed and cleansed of clots, the parts are brought into proper position and maintained thus by a silver wire passed through each in turn to form something like a circle. He calls the method "central circling." This was followed by immobilization for several weeks.

Semaine Médicale, Paris

February 3, XXIX, No. 5, pp. 49-60.

71 Different Types of Cardiac Arrhythmia Observed in the Clinic. L. Bard.

February 10, No. 6, pp. 61-72

72 Evolution and Present Status of Surgical Treatment of Diffuse Purulent Peritonitis. F. Moty.

Archiv für klinische Chirurgie, Berlin

LXXXVIII, No. 2, pp. 319-629. Last indexed Jan. 30, p. 423

73 Clinical History of Deforming Inflammation of the Hip Joint. (Arthritis deformans coxæ.) König.
74 Hydatid Cysts of Spine and Spinal Cord. (Echinokokken der Wirbelsäule und des Rückenmarks.) M. Borchardt und M. Rothmann
75 Double Nephrectomy and Reimplantation of One Kidney. (Doppelte Nephrektomie und Reimplantation einer Niere.) A. Carrel.
76 Bacteriemia in Ileus and Postoperative Paralysis of the Bowel. A. v. Khautz, Jr.
77 Carcinoma of the Tongue. (Zur Statistik des Zungencarcinoms.) H. Ehrlich.
78 Extensive Resection of Stomach. (Zur Casuistik der ausgedehnten Magenresectionen.) W. J. Rasumowsky.
79 *Actinomycosis of Lung and Pleura. A. A. Opokin.
80 Brain Abscesses After Firearm Wounds. (Hirnabscesse nach Schussverletzungen im japanisch-russischen Kriege.) V. T. Hashimoto, Y. Kuroiwa and R. Mori.
81 Diphtheria at Bethanien Hospital, Berlin, 1903-1908. E. Schultze.
82 Osteotomy of the Cuneiform Bone for Hallux valgus. (Osteotomie des Keilbeines bei Hallux valgus.) H. Riedl.
83 Infection of Firearm Wounds. (Infection der Schussverletzungen.) W. v. Reyher.
84 Plastic Operation for Avulsion of Scalp. F. Ehler.

79. **Actinomycosis of the Lungs and Pleura.**—This article reviews Russian literature on this subject—a total of 57 cases, in 21 of which operative treatment was applied. Only 8 cases are on record in international literature, Opokin states, in which operative measures were followed by complete recovery. Primary actinomycosis of the lungs is seldom recognized during life, the symptoms being differentiated as of tuberculous origin. Bacteriologic and Roentgen-ray examination are important aids for an early diagnosis, but the outlook is not promising for surgical intervention in actinomycosis of either lungs or pleura, unless in the earliest stage, before metastasis has occurred. Surgical treatment should include resection of the foci and fistulas into sound tissue. In conclusion 7 cases observed at Rasumowsky's clinic are described in detail.

Beiträge zur klinischen Chirurgie, Tübingen

January, LXI, No. 2, pp. 301-527

85 Operative Exposure of Upper Posterior Surface of Thorax. (Zur operativen Freilegung der hinteren oberen Thoraxfläche.) G. v. Saar.
86 Operative Treatment of Pseudarthrosis. (Die Codivilla'sche Operation zur Behandlung der Pseudarthrose.) R. Brade.
87 *Hemorrhoids. O. Silberberg.
88 Combined Syndactylia and Polydactylia. E. Jacobsohn.
89 *Pathology of Rupture of Bladder. (Harnblasenrupturen.) T. Goldenberg.
90 *Rupture of Kidney. (Nierenrupturen.) H. Yoshikawa.
91 *Diffuse Hemorrhage from the Kidneys. (Ueber renale Massenblutungen.) T. Bleek.
92 Case of Total Autoamputation of Intestine. (Fall von totaler Selbstamputation des Darmes.) W. Pullmann.
93 Resection of Tuberculous Knee. A. Linhart.
94 Operative Treatment of Pyosalpinx. J. Amberger.
95 Subcutaneous Prolapse of Intestine, a Typical Clinical Picture. G. v. Saar.

87. **Hemorrhoids.**—Silberberg has studied microscopically sections from twenty-two cases of hemorrhoids, his conclusions being that they are the result of local congestion. The disturbance in the circulation causes an effort for collateral circulation with neoformation of vessels, and also induces degeneration of the older vessels and bacterial infection fol-

lows. The chemical reaction of the elastic fibers proves conclusively that the hemorrhoid is the result of pressure and stasis.

89. **Rupture of the Bladder.**—Goldenberg reports three cases and discusses the pathology on the basis of these and the cases in the literature. In many instances the rupture was not diagnosed until too late for surgical intervention. The mortality of rupture of the bladder has dropped from 43.5 per cent. in 1895 to 20.5 per cent. in 1905, when operative treatment can be instituted in time. It is especially important to bear in mind the possibility of rupture of the bladder from its being pushed down into the small pelvis by some "physiologic trauma," the attachment to the omentum tearing out a piece of the attached bladder wall where it joins the rear wall, when cicatricial changes have induced unyielding adhesions. One of the cases reported was an example of this spontaneous form of rupture.

90. **Rupture of the Kidney.**—Yoshikawa gives the details of five cases. The patients were men between 25 and 42, a woman of 30 and a boy of 12. Unless there are signs of internal hemorrhage, absolute repose with ice to the kidney region are indicated. His patients were all dismissed in good condition after operative intervention.

91. **Hemorrhage From the Kidneys.**—Bleek discusses the possibility of unilateral nephritis with hemorrhage en masse and reports a case which sustains this assumption. The affection was probably a manifestation of inherited syphilis and it was diagnosed as "incipient chronic hemorrhagic nephritis," the patient a girl of 19. He reviews 80 cases from the literature in which microscopic examination was made of the bleeding kidney before the operation, and also 11 other cases of renal hemorrhage. No hemorrhage from the kidney should be styled idiopathic until after microscopic examination has been made. Operative treatment should be considered early, especially nephrotomy, which often has a favorable influence on the hemorrhage, but it should never be undertaken without certainty as to the integrity of the other kidney, as deaths have occurred after nephrotomy in bilateral nephritis. Nephrectomy should never be done as the primary operation for obscure unilateral renal hemorrhage. It is justified only as a secondary intervention when the integrity of the other kidney has been demonstrated.

Deutsche medizinische Wochenschrift

February 4, XXXV, No. 5, pp. 185-232.

96 Operative Treatment of Gastric Carcinoma. (Operative Behandlung des Magencarcinoms, ihre Indikationen und ihre Prognose.) L. Kuttner.

97 *Alimentary Fever. (Ueber alimentäres Fieber.) H. Finkelstein.

98 *Experimental Research on Alimentary Fever. L. F. Meyer.

99 *Salt by the Mouth and Intravenously in Treatment of Internal Hemorrhage. (Die stomachale und intravenöse Behandlung innerer Blutungen mit Kochsalz.) R. von den Velden.

100 Three Cases of Bismuth Poisoning. (Vergiftungen mit Bismutum subnitricum.) E. Zabel.

101 Treatment and Bacteriology of Suppurative Perforation Peritonitis. Kotzenberg.

102 Elimination of Atoxyl in Urine. (Ausscheidung des Atoxyls durch den Harn.) G. Lockemann.

103 To Exclude Admixture of Organic Coloring Matters in Spectrum of Blood. (Ausschaltung organischer Farbstoffbeimengungen beim spektroskopischen Blutnachweis.) O. Leers.

104 The Pulsometer. B. Fellner.

97. **Alimentary Fever.**—Finkelstein here presents the grounds on which he bases his assumption that the food alone, without bacterial intervention, is able under certain conditions to induce fever. This alimentary fever is most striking and most easily studied in infants with gastrointestinal disturbances, and his research has resulted in the discovery that albumin has nothing to do with it, and that sugar and salt are the responsible factors. Fat may have an indirect influence, but the sugar or salt is the one responsible element, and it acts by its physical properties. He is convinced that the physical properties of the salts and salt-like elements in the food have some injurious influence on the cells, checking their normal functioning and thus leading to abnormal decompositions in the body, which in turn disturb the regulation of heat. The normal child tolerates salt and sugar without disturbance, but a child with gastrointestinal disturbance responds with fever. Salt or sugar taken into the diseased digestive tract causes the same reaction as when injected subcutaneously. The intestines have evidently some special action on the salt and sugar molecules, rendering them innocuous in normal conditions, but when the intestine is deranged it loses this power. The liver acts vicariously for the intestines in this respect for a time, but when its capacity in this line is exhausted, then alimentary intoxication follows and fever is observed. In infants the intestinal functions and the metabolism in general are still very weak, and consequently the alimentary intoxication occurs on very slight grounds. He believes that severe intestinal processes in adults, chronic colitis, etc., are liable to entail alimentary intoxication in the same way as in infants. The experiences with the latter suggest greater caution in feeding adults with gastrointestinal disturbances with fluids containing salt or sugar, emphasizing the possible importance of sugar and salt in the diet during intestinal derangement and demonstrating the existence of a function of the bowel epithelium in respect to the metabolism of salt and sugar, disturbance in which may explain obscure febrile conditions at all ages.

98. **Experimental Research on Alimentary Fever.**—Meyer is Finkelstein's assistant and his experimental research has confirmed in every respect the former's assumptions in regard to alimentary intoxication from salts. He has traced it down to the compounds of halogens with sodium. None of the other sodium compounds displays this fever-producing property, only sodium chlorid, bromid and iodid. The curves cited demonstrate beyond question the possible pyrogenic influence of these latter when the digestive tract is out of order.

99. **Salt in Treatment of Internal Hemorrhage.**—von den Velden has studied for a year the use of salt by the mouth or in infusion as a means of controlling hemorrhage. His experience has confirmed the traditions in regard to the influence of salt in this respect. His research on animals and on healthy volunteers as well as in the clinic has demonstrated that salt enhances the coagulating power of the blood. It is remarkable, however, that it does not have this action in the test-tube, but it is marked in the living subject. He is inclined to attribute this coagulating influence to the mobilization of thrombokinase stored up in the tissues. In 29 cases of hemoptysis he obtained excellent results from administration of 5 gm. (75 grains) of sodium chlorid by the mouth, the coagulating properties of the blood being much increased thereby for a period of from an hour to an hour and a half. The effects become evident in a few minutes. If the tendency to hemorrhage returns later, he repeats the dose of salt or substitutes sodium or potassium bromid in the dose of 3 gm. (45 grains), the bromid having, further, a sedative action. He does not hesitate to keep up this combined sodium chlorid and bromid treatment, giving in the most urgent cases from 20 to 30 gm. (℥v to ℥i) of sodium chlorid, and from 12 to 15 gm. (℥iii to ℥iv) of the bromid during the day. Any tendency to bromin intoxication is corrected by use sodium chlorid. In 9 other cases he administered the salt or bromid by intravenous injection as he did not wish to irritate the digestive tract or kidneys. This series includes seven patients with hemoptysis, and one each with hemorrhage from varices in esophagus or bladder or typhoid lesions in the bowel. He has never witnessed any disagreeable by-effects from this treatment. The beneficial results were apparent in hemorrhage both in the lung and greater circulation. Hemophilia is a chronic defective condition for which a transient increase in coagulating power is of little avail. The hemophilic tendency is probably the result of defective production of thrombokinase, he thinks.

Fortschritte der Medizin, Leipsic

January 20, XXVII, No. 2, pp. 49-96

105 *Treatment of Syphilis of Nervous System. (Behandlung der Nervensyphilis.) G. Köster.

106 *Assumed Connection Between Tapeworm and Pulmonary Tuberculosis. (Zur Frage über den mutmasslichen Zusammenhang zwischen der Erkrankung an Bandwurm, speziell *Botryocephalus latus*, und derjenigen an Lungentuberkulose.) Abramowski.

105. **Treatment of Syphilis of the Nervous System.**—Köster advocates local measures along with general mercurial treatment wherever practicable, especially for lesions in throat and mouth. He warns against mercurial treatment when there are already signs of atrophy of the optic nerve as it has been known to aggravate the condition. If undertaken it should be with constant oversight of the conditions in the fundus. Even suspension of treatment when the aggravation is noted does not arrest it. For this reason he advises potassium iodid first, and, if mercurial treatment becomes necessary on account of other syphilitic manifestations, the eye should be examined by an ophthalmologist every third day. He also warns against the use of atoxyl; it not only is liable to have an injurious influence on vision but may induce disturbances in the voiding of bladder and bowel contents leading to total incontinence. He emphasizes the fact that this widely advertised drug, alleged to be free from toxic action and to be a sort of panacea for diverse diseases, in treatment of syphilis, is proving a two-edged sword which should be used only with extreme caution. A course of mineral waters, as at Aachen, Wiesbaden or Tölz, is a powerful adjuvant in treatment of syphilis of the nervous system on account of the stimulation of the general metabolism. Even if no benefit is derived from the first course of the kind, experience has shown that hitherto apparently irreparable symptoms may subside during a second or third repetition.

106. **Pulmonary Tuberculosis and Tapeworm.**—Abramowski practices in a seashore district where the tapeworm is common owing to the frequent practice of eating insufficiently cooked fish. He has noticed that the anemia resulting from the presence of the *Bothriocephalus latus* affords a marked predisposition for pulmonary tuberculosis which is also remarkably prevalent. Even the "resorters" frequently acquire tapeworm during their stay as smoked raw fish is considered a local delicacy.

Münchener medizinische Wochenschrift

February 2, LVI, No. 5, pp. 217-264

107 Multiple Functions of the Cell. (Partialfunktionen der Zelle.) P. Ehrlich.
108 Localization of the Curvature, and Other Requisites in Treatment of Scoliosis. (Lokalisation der Umkrümmung und andere Forderungen in der Skoliosenbehandlung.) J. Fränkel.
109 Roentgen-Ray Treatment. (Die Röntgenstrahlen im Dienste der Therapie.) E. Müller.
110 Disagreeable Consequences of Colpocelitotomy and the Alexander-Adams' Operation. H. Freund.
111 Systematic Disinfection by Municipal Authorities. (Die Methoden der praktischen Grosstadtdesinfektion.) H. Trautmann.
112 Arrest of Hemorrhage from the Cystic Artery by Ligation of the Hepatic Artery. (Stillung der Blutung aus der Art. cystica durch Unterbindung der Art. hepatica propria.) H. Kehr.
113 Arsenicated Mineral Waters. (Zur Arsentherapie mit der Dürkheimer Maxquelle.) R. von den Velden.
114 Scarlet Red in Treatment of Eye Affections. (Anwendung von Scharlachrot bei Augenaffektionen.) M. Wolfrum and R. Cords.
115 Treatment of Tuberculin with Spengler's "1K." S. Herzberg.
116 Dental Frontal Headache. (Dentaler Stirnkopfschmerz.) F. Müller.
117 Peruvian Balsam, Etc., in Suppurative and Tuberculous Processes. (Anwendung der Digestivmittel bei eitrigen und tuberkulösen Prozessen.) M. Mayer.

Therapeutische Monatshefte, Berlin

February, XXIII, No. 2, pp. 65-128

118 *Treatment of Acute Alimentary Disturbances in Infants. (Therapie der akuten Ernährungsstörungen im Säuglingsalter.) B. Salge.
119 *Preparation for and Care After Gynecologic Operations. R. Birnbaum.
120 Heart Tonics Before and After Gynecologic Operations. (Herzmittel vor und nach gynäkologischen Operationen, nebst Bemerkungen über die Bedeutung von Narkose und Operation bei Erkrankungen des Zirkulationsapparates.) R. T. Jaschke. Commenced in No. 1.
121 Relations Between Constitutional and Ear Affections. (Beziehungen zwischen Allgemeinleiden und Ohrkrankheiten.) Preysing. Commenced in No. 1.
122 *Nature and Treatment of Typical Form of Benign Stenosis of the Colon at the Splenic Flexure. (Typische guttartige Stenose an der Flexura lienalis coli.) E. Payr. Commenced in No. 1.
123 Treatment and Danger of Contagion in Pertussis. (Ansteckungsgefahr und Therapie des Keuchhustens.) E. Müller.
124 Dangers of Intravenous Strophanthin Treatment. (Gefahren der intravenösen Strophanthintherapie.) A. Fraenkel.
125 Disadvantages of Combination of Digitalis with Other Drugs. (Kombination der Digitalis and homologer Agenzien mit anderen Arzneimitteln.) J. Pohl.

118. **Treatment of Acute Alimentary Disturbances in Infants.**—Salge remarks that the mother always insists on adding something to the water when the indications are to stop all intake of food while the digestive apparatus is closed for repairs. For this reason he allows admixture of tea with the water, but sweetened only with saccharin, no sugar. If the infant vomits constantly, its lips and tongue can be kept moistened with cold water from a dropper. When there is much diarrhea it is foolish to give laxatives or to try to check the diarrhea with drugs as it is answering a useful purpose. If fluids given by mouth or rectum are not retained, from 125 to 150 c.c. of physiologic salt solution should be infused twice during the twenty-four hours. The temperature should be brought to normal with from four to six cold packs in an hour, repeated again during the day, or if the child is cold, warming it with thermophores or the incubator. But he warns emphatically that these measures require the most constant supervision as the effect frequently runs to the opposite extreme. Camphorated oil may be useful in case of weak heart action. The trouble is in the general metabolism, not merely in the digestive tract alone, and the metabolism will suffer irreparable injury if all food is stopped for more than twenty-four or forty-eight hours. Infants suffer especially from lack of carbohydrates, but they must be given in minute amounts and very cautiously not to supply a culture medium for bacteria in the intestines. It may be necessary to remove the fat even from breast milk by centrifugalizing it but when this is done the child is liable to thrive at once. Not more than from 30 to 50 c.c. daily should be allowed during the first two or three days, watching the urine for sugar. The limits of toleration for the carbohydrates are very narrow in these children, so that constant supervision is necessary as any excess may bring on new disturbances. After the infant has borne this fat-free diet for from ten to fourteen days, the whole milk can be resumed, but it is impossible for recuperation to be very rapid as the general metabolism has been so disturbed. If unable to obtain fat-free breast milk, he gives instead freshly prepared whey obtained from raw cow's milk with rennet.

119. **Care of Patient Before and After Gynecologic Operation.**—Birnbaum states that he has frequently found the temperature several degrees below normal at the close of a tedious operation, even when the operating table and room were specially heated. This shows the importance of warming the patient after an operation. Continuous irrigation of the rectum with warm salt solution, a drop at a time, by the Katzenstein technic, he advocates as the most reliable measure for the purpose. It has the further advantage of stimulating bowel peristalsis without incommoding the patient. Cold alcohol rubs of the chest and back are useful to prevent thrombosis and complications on the part of the lungs. Systematic breathing exercises are also in order, and active and passive exercises of the legs. He prefers repeated and systematic catheterization and disinfection rather than the employment of a retention catheter in case of paralysis of the bladder. When there are symptoms of paralysis of the intestines, he states that great benefit is obtained by rinsing out the stomach, followed by the administration of a large dose of castor oil.

122. **Stenosis from Kinking of the Intestine at the Splenic Flexure.**—Payr describes in detail twenty-five cases of nonmalignant stenosis of the colon in which he has performed operations during the last four years with permanently successful results.

Therapie der Gegenwart, Berlin

February, I., No. 2, pp. 73-120

126 *Gout. (Zur Pathologie und Therapie der Gicht.) F. Umber.
127 Changes in Application of Digitalis in Spontaneous Hemorrhage. (Wandlungen im Digitalisgebrauch bei spontanen Blutungen.) Focke.
128 Experimental and Clinical Study of Treatment of Collapse with Intravenous Injections of Adrenalin. (Behandlung von Kollapszuständen mit intravenösen Adrenalininjektionen.) R. Kothe.

126. **Treatment of Gout.**—This article is based on extensive personal research on the metabolism of individuals with gout,

out of a total of 137 cases, with comparative research on healthy subjects. The findings are particularly instructive as the research was undertaken almost exclusively on a purin-free diet, thus providing a common base for comparison. Twenty-seven of the patients were of the laboring classes. The practical results of the research described include the typical curve of the elimination of uric acid on a purin-free diet. The amount eliminated grows less and less until an attack of gout is impending, when the elimination rapidly increases to reach a high point about the second day after the onset of the attack, and then rapidly subsides again. These waves of endogenous elimination vary somewhat in individuals, but a long continued endogenous curve including several attacks is absolutely pathognomonic, as he shows by comparison with curves in various other affections. Another point is that the gouty respond to ingestion of purin bodies with a much less and more protracted elimination of uric acid than the non-gouty, especially during the depression stage following about a week after an attack. Ingestion of food containing much purin is liable to bring on an attack of gout. He ascribes the retention of uric acid to a peculiar affinity of the tissues for the uric acid. Another pathognomonic feature of gout is the opposite behavior of glycocoll, the retention of one coinciding with increased elimination of the other. During the flood of uric acid in an attack, the glycocoll vanishes completely. There is no medicinal treatment of gout, Umber says, except to relieve the acute attack; the only way to influence the disease is by the diet, which should aim to prevent the accumulation of uric acid in the tissues and in the blood and to provide the most favorable conditions for its metabolism and elimination. He advises refraining from meat entirely when an attack is threatening and for a week or two afterward, and to interpolate from 2 or 3 up to 4 or 6 purin fast days in each week, keeping this up for weeks, months and years. He never allows more than 200 gm. of meat in one day. His research has further confirmed the fact that the retention of uric acid is more pronounced in proportion at night, and consequently he advises that the gouty should take their principal meal in the morning or at latest noon. He quotes Garrod that every particle of food not absolutely needed for the nourishment of the body merely nourishes the disease. Copious ingestion of water certainly aids in the elimination of uric acid, but alkaline waters have the opposite effect. It is all the other factors of spa treatment rather than the mineral content of the water that benefit in a course at a watering place. He remarks in regard to the various remedies for gout on the market that they all promote the solubility of free uric acid, but this does no good in gout as the blood of the gouty is able to dissolve larger proportions of free uric acid than it ever contains. The problem is to dissolve the acid sodium urate, the form in which the uric acid is deposited in gout. These remedies have no action on the sodium urate and he thinks that this is true also of hydrochloric acid. He declares that none of the alkalies or mineral waters has any specific influence on the purin metabolism in gout and that the propaganda for the "lithium content," etc., of springs should be abandoned. He has noticed that the elimination of uric acid decreased during muscular exercise even on a purin-free diet. This must be due to participation of the purin bodies in the increased oxidation processes incident to muscular exertion. This recalls, he says, the saying of an English physician that no man would suffer from gout if he could keep a slave to massage him regularly.

Virchows Archiv, Berlin

January, CXCV, No. 1, pp. 1-176

129 Morphologic Structure and Morphologic and Chromatic Changes in the Leucocytes. A. Cesaris-Demel.
130 Wax-like Transformation of Muscle Fibers. (Wachsartige Umwandlung der Muskelfasern.) R. Thoma.
131 Implantation of Embryonal Tissue. M. v. Tiesenhausen.
132 Sarcoma and Carcinoma in the Thyroid of a Dog. G. Schöne.
133 Anatomic Study of Appendix and Appendicitis. W. Nowicki.

Zentralblatt für Chirurgie, Leipsic

January 30, XXXVI, No. 5, pp. 137-176

134 Regional Anesthesia in Transplantation of Skin. (Regionäre Anästhesie bei Hauttransplantation.) G. Nystrom.
135 New Apparatus for Intrathoracic Operations Under Differential Pressure. (Neuer Apparat für intrathorakale Operationen unter Differentialdruck.) W. Meyer (New York).

February 6, No. 6, pp. 177-208.

136 *Artificially Induced Open Hydrothorax for Prevention of Collapse of Lung When Thorax Is Opened. (Der künstliche offene Hydrothorax zur Erhaltung der Lungenatmung bei Thoraxeröffnungen.) H. Teske.

136. Artificially Induced Open Hydrothorax to Prevent Collapse of Lung.—Teske has found that if water is allowed to flow into the thorax when it is opened, the lung floats on the water and it does not collapse. He found this a perfectly practical and feasible way to maintain approximately normal respiration in the exposed lung when a large flap was cut in the thorax wall. He experimented on rabbits, placing them in a bath-tub with blood-warm water and found that respiration proceeded with surprising regularity and normal tempo, the exposed lung keeping time with the intact lung. If the animal was taken out of the water but left on its back, enough water remained in the chest to answer the desired purpose, but if the animal was turned on its belly, the water ran out and the lung collapsed at once. He also found it possible to accomplish the purpose by artificial irrigation of the thoracic cavity, allowing the water to flow in and out, the cannula being wide enough to keep the opening from closing. He is convinced that this method of preventing the collapse of the lung in cases of injury of the lung or heart requiring surgical intervention will prove useful in the clinic, especially in urgent cases requiring rapid work. The shock from collapse of the lung will thus be avoided. Warm salt solution has a stimulating effect on the organs in the chest. He concludes the operation by suturing the lung to the chest wall and allowing the water to escape. He does not think that there need be fear of infection if sterile salt solution and rubber gloves are used, especially as the pleura possesses normally considerable resisting power against infection.

Zentralblatt für Gynäkologie, Leipsic

January 30, XXX, No. 5, pp. 161-200

137 Bacteriologic Diagnosis of Puerperal Fever. Krönig and Pankow.
138 Suture of Skin at Perineum with Michel's Clips. (Zur Hautnaht des Dammes mittels Michel'scher Klammern.) K. Mayer.
139 Construction of Vagina out of Loop of Small Intestine. (Scheidenbildung unter Benutzung einer verlagerten Dünndarmschlinge bei Uterus rudimentarius cum Vagina rudimentaria.) M. Mori.
140 Roentgen-Ray Treatment in Gynecology. Albers-Schönberg.
141 Treatment of Vaginismus with Vaginal Dilator. O. Oberländer.
142 Absorbing Power of Mucosa of Vagina and Uterus. (Resorptionsfähigkeit der Schleimhaut der Vagina und des Uterus.) E. Falk.

February 6, No. 6, pp. 201-232

143 Clinical and Anatomic Study of Endometritis. M. Henkel.
144 *Vaginal Cesarean Section in Severe Eclampsia a Month before Term. (Vaginaler Kaiserschnitt bei schwerster Eklampsie im 8. Schwangerschaftsmonat.) Nacke.
145 Dilator for Treatment of Abortion. (Uterusdilatator bei Abortbehandlung.) O. Oberländer.

144. Vaginal Cesarean Section in Severe Eclampsia.—Nacke relates a case which demonstrates that this intervention may prove the only life-saving measure possible in severe eclampsia. But the case further emphasizes the possible complications and mishaps liable when such an operation is attempted in a private house, and that the operation may meet with unexpected difficulties when done before the cervix is dilated, especially when the latter is abnormally long.

Hygiea, Stockholm

December, LXX, No. 12, pp. 1235-1378

146 *Suppurative Affections of the Internal Ear. (Om inneröratsvariga sjukdomar.) G. Holmgren. Commenced in No. 11.
147 *Vaginal Technic for Operations in Gynecology and Obstetrics. A. Hübrssen.
148 Ear Affections in Traditional Household Medicine. (Om öronsjukdomarna i den skånska folkmedicinen.) E. Bergh.

146. Suppurative Affections of the Internal Ear.—This article is practically a clinical study with details of typical specimens of each of the various affections involved and the conclusions from comparison of the course with results of treatment and pathologic findings; the whole is classified under the headings of the different affections described. Holmgren has continued Blau's compilation of cases of necrosis of the labyrinth on record, and tabulates the details of 20 more,

thus bringing the total to 124. He devotes a chapter to the prognosis and complications of labyrinthitis and another to the treatment and technic, with 12 pages of bibliography, likewise classified.

147. **Vaginal Technic for Operations.**—This communication from Dührssen was read at the last Swedish medical congress and is accompanied by eight illustrations to explain the details of the vaginal technic. He also describes his recent modification of his method of vaginal Cesarean section by preceding it with the hysterecurynter, utilizing the measure, he remarks, which the practitioner should always regard as the first indispensable step in all cases requiring immediate delivery with the cervix still undilated. If the case is very urgent, manual traction can be exerted on the inflatable bag, but if the cervix fails to dilate when the lower segment of the uterus is thus pulled down, the attempt should be abandoned, as otherwise the cervix or the inflatable bag is liable to rupture. This is especially the case with rigid cervix, and if the cervix persists undilated vaginal Cesarean section is required, or deep incisions in the vaginal portion of the uterus if the cervix has opened. In such a case the general practitioner must summon a specialist or should limit his intervention to expectant treatment until the progress of labor has rendered manual extraction possible. The use of the inflatable bag facilitates Cesarean section. By traction on the bag it is possible to bring the cervix into view when it is an easy matter to make a sagittal incision in the posterior lip and prolong it upward for about 3 cm. With the gloved finger the peritoneum is then pushed away from the posterior wall of the bladder, as far up as necessary, and a loop of suture material is passed through the upper end of the slit. The anterior lip is then incised and a loop of thread introduced in the same way. The inflated bag sinks lower and lower as the cervix opens, and the upper parts of the cervix walls are thus brought into view and can be easily incised, with the bleeding under control. The bag finally slides out of the uterus, when the fetus can be easily extracted. After the placenta has separated, the uterus is drawn down by the loops of thread; the threads are tied and the posterior and then the anterior lips of the cervix are sutured. The continuation of the incision into the fornices does not require suturing as the lips of the wounds are pressed closely together. When the aftercoming head is retained by the cervix the procedure is about the same, the head acting like the inflatable bag whose place it takes. He has successfully applied this technic in one case, severing the constricting ring. The technic is the same as that recently proposed by Döderlein, but Dührssen does not approve of it except under these conditions, as one has to operate in the dark and he doubts whether the bladder will ever spontaneously detach itself from the uterus wall. If it does not, injury of the viscus is almost inevitable. The cases which require vaginal Cesarean section are the very ones in which there is almost certain to be special adhesion between the bladder and uterus, as in elderly primiparæ with rigid cervix or in case of prolapse. Comparing the vaginal and abdominal extraperitoneal technics he remarks that the public has greater dread of abdominal than of vaginal operations, but that the abdominal extraperitoneal technic has certainly a brilliant future in cases of much contracted pelves.

Norsk Magazin for Lægevidenskaben, Christiania

January, LXX, No. 1, pp. 1-24

149 Cardiac Insufficiency with Contracted Kidney and High Blood Pressure. (Arteriosklerose med skrumpnyre og hjertehypertrofi.) P. F. Holst.

150 Torsion of Pedicle of Left Ovary in Two Little Sisters. (Stilkdreining af venstre ovarium hos to søstre, 8½ og 7 aar gamle.) J. Roll.

151 Cutaneous and Ocular Tuberculin Reactions. E. Kaurin.

152 Favorable Experiences with Trusses in Hernia. (Smaatrack fra brokbaandsbehandlingen.) O. Berchgrevink.

153 Five Generations of a Family with Six Fingers and Toes. (En familie med seks fingre og seks tær.) V. Magnus.

154 *Forty-three Cases of Exophthalmic Goiter. (Morbus Basedowii.) H. J. Vetlesen.

154. **Exophthalmic Goiter.**—Vetlesen's article is published as a 128-page supplement to the *Magazin*. All but 2 of the 43 patients were women, and the majority of cases developed between the ages of 20 and 30 or 40 and 50. A fright or great sorrow had evidently something to do with the onset of the affection in several cases, and acute articular rheumatism or rheumatic complications were evident in 8. One patient had had acute rheumatism five times. He also calls attention to the fact that 8 of his patients suffered from hemicrania and that 3 of these and 5 others had a family history of hemicrania in the parents or grandparents. He believes that this suggests some special connection between exophthalmic goiter and hemicrania. Simple goiter was also noted in the direct family antecedents of 4 of his patients, and 4 others have brothers or sisters with goiter. In 3 cases both mother and daughter were affected. All his patients were cured or much improved with the exception of 5 whose deaths later are recorded. His treatment consisted of thymus extract and sodium phosphate, alone, alternating or combined, and his impressions are very favorable as to the efficacy of this method of treatment. He is undecided as to whether the sodium phosphate or the thymus extract deserves the preference, but the cost of the latter sometimes turns the scale against it. Thyroid treatment of exophthalmic goiter is directly contrary to the indications, the trouble is the result of hyperfunctioning of the thyroid gland and it is absurd to give more thyroid. It is even liable to transform a simple goiter into the exophthalmic form, of which he relates several examples, the patients having been given thyroid treatment by some other physician before they consulted him. One of his patients was doing well under sodium phosphate when exacerbation followed an attack of influenza, and he ordered thymus tablets. No improvement followed, the general condition and symptoms rather becoming aggravated. After taking from 70 to 80 tablets the patient discovered that the bottle was labeled "thyroid tablets" instead of the prescribed "thymus." As soon as thymus tablets were substituted for the thyroid, improvement was rapid and has been permanent to date. In one of the cases with fatal termination the patient had been taking "antithyroidin," which seemed to have a toxic action. Roentgen-ray treatment was applied in only 2 cases; the results were excellent in one but nearly negative in the other. Operative treatment was instituted in 2 cases; in the first there was considerable improvement for a few months but then a second operation became necessary and the patient soon succumbed to asystoly or possibly embolism. The other patient seemed to derive great and permanent benefit from the operation. He prescribes the sodium phosphate in the dose of 1 gm. (15 grains) in solution four times a day. The more recent the onset of the symptoms, the more effectual the sodium phosphate. He gives from 2 to 4 of the thymus tablets three times a day. He tabulates the details of the 43 cases for comparison, with the age, initial symptom, treatment, etiology, etc. He has been using the sodium phosphate since before 1899, on the recommendations of Trachewsky, Sahli and Kocher. He has never witnessed any inconveniences from its administration, even when kept up for many months. Very exceptionally, a little tendency to diarrhea was noticed, but this righted itself at once when he reduced the dose somewhat. He tried several other drugs in the course of his experiences, but long since abandoned them all for the sodium phosphate or thymus tablets.

Ugeskrift for Læger, Copenhagen

January 21, LXXI, No. 3, pp. 57-76

155 *Papulous Syphilids in Mouth Nine Years After Infection, with Positive Findings of Pale Spirochetes. L. Nielsen.

January 28, No. 4, pp. 77-106

156 Diagnosis of Destruction of the Internal Ear. (Om Diagnosen Labyrintdestruktion.) P. T. Hald.

155. **Papulo-Erosive Syphilids in Mouth Nine Years After Infection.**—Nielsen's patient was a man of 28 who had been infected with syphilis nine years before and had been smoking some of late. Typical pale spirochetes were cultivated from the scrapings of the lesions in the mouth. The primary infection had been thoroughly treated, it was supposed. In two other patients the syphilids developed on the tongue eleven and thirteen years after infection and recurred whenever the patient smoked much.

Gazzetta degli Ospedali e delle Cliniche, Milan

January 24, XXX, No. 10, pp. 97-112

157 *Influence of Injections of Lecithin on Serodiagnosis of Syphilis. (Azione delle iniezioni di lecitina sulla reazione di Wassermann.) G. Quarelli.

January 28, No. 12, pp. 121-128

158 *Phlebitis Following Interval Appendicectomy. A. Sertoli.

January 31, No. 13, pp. 129-144

159 *Hernia of Diaphragm with Gastric and Intestinal Stenosis. (Ernia diaframmatica.) F. Senna.

160 *Primary Cancer of Pancreas; Chauffard's Syndrome in Diagnosis. G. Alessandri and C. Minerbi.

February 2, No. 14, pp. 145-152

161 *Stimulating Influence of Scarlet Red on Regeneration of Epithelium. A. Cernezzi.

157. **Influence of Injections of Lecithin on Serodiagnosis of Syphilis.**—Quarelli states that in twelve cases of syphilis in which serodiagnosis was positive, several injections of lecithin had the result that the serodiagnosis gave negative findings thereafter in all but four cases. In some of these, however, the reaction increased in intensity.

158. **Phlebitis Following Interval Appendicectomy.**—The three patients in the cases reported by Sertoli were young men, and the phlebitis developed between the tenth and fourteenth day of aseptic healing of the wound. They were all debilitated from repeated attacks of appendicitis. The phlebitis was limited exclusively to the left leg and subsided harmlessly after a few days.

159. **Hernia of the Diaphragm.**—Senna reports a case to emphasize the points useful for differentiation. It is not difficult if the phenomena in the chest and abdomen are minutely studied and coordinated. The autopsy in his case confirmed the diagnosis showing that the sudden symptoms were the result of incarceration of the stomach in the hernia. A perforation was found in the stomach and also in the ascending colon which was likewise involved in the hernia. An important sign is the presence of gas in the pleural cavity, without metallic sounds.

160. **Cancer of the Head of the Pancreas.**—The syndrome presented was that described by Chauffard as characteristic of primary cancer of the head of the pancreas. The only additional symptom was uncontrollable vomiting. The Loewy sign—the ocular reaction to adrenalin—was very pronounced. The cancer in this case had originated in the gall bladder, which contained stones, and had involved the liver, spreading later to the head of the pancreas, but the body was intact. The case does not detract from the importance of the Chauffard syndrome, but shows that it differentiates malignant disease in the head of the pancreas only when there are no other foci elsewhere and when direct palpation of the gall bladder excludes biliary lithiasis with reasonable certainty.

161. **Influence of Scarlet Red on Regeneration of Epithelium.**—Cernezzi has been applying a 5 or 8 per cent. lanolin or petrolatum salve of scarlet red, the dye which Fischer found so remarkably active in inducing proliferation of epithelium. Cernezzi applied the salve to extensive burns or other raw surfaces, or to hasten the healing of Thiersch or Reverdin flaps. He applies the salve in a thin layer to the edges, covering it with perforated rubber tissue, renewing the dressing in one or two days. The rapid proliferation of the epithelium was most striking even in cases long rebellious to other measures. One man with a burn of the entire forearm and part of the hand was treated with Thiersch flaps and the scarlet salve and the lesions healed over very rapidly with a much firmer growth of epithelium than is usual after such transplantation, allowing the man to resume his trade as a mechanic without mishap during the five months since. No by-effects were ever observed with the salve. Cernezzi warns that it is not necessary to apply the salve except to the edges of the islands or borders of epithelium; it is inadvisable to interfere with the development of granulations by applying the salve to them as it might induce maceration. Neither he nor Schmieden thinks there is any danger of inducing excessive proliferation as the salve is applied lightly to the surface, not injected subcutaneously as in Fischer's experiments.

Policlinico, Rome

February 7, XVI, No. 6, pp. 165-196

162 *Lime in Treatment of Epilepsy. (La terapia calcica nell' epilessia.) F. Ciccarelli. (Commenced in No. 5.)

162. **Lime in Treatment of Epilepsy.**—Ciccarelli gives the details of twenty-nine cases of epilepsy in which he found that treatment with lime had a pronounced effect in mitigating the seizures and reducing their number. He regards the lime salts as preferable to the bromids at times, the best results being obtained when a course of lime was alternated with the ordinary bromid treatment. He gave daily from 2 to 3 gm. (30 to 45 grains) of calcium hypophosphite in fractional dose. The patients were all chronic epileptics, although the affection was of traumatic origin in some and associated with infantile spastic paralysis in others, the majority, however, being of the idiopathic variety.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

EDUCATIONAL PAMPHLETS, Issued by the Committee on Experimental Medicine of the Medical Society of the State of New York, 17 West Forty-third Street, New York. ANIMAL EXPERIMENTATION AND DIABETES. By Graham Lusk. New York City. THE ETHICS OF ANIMAL EXPERIMENTATION. By John Dewey, New York. ANIMAL EXPERIMENTATION AS VIEWED BY THE SUPERINTENDENT OF A HOSPITAL. By G. F. Clover, New York City. THE SERVICE OF ANIMAL EXPERIMENTATION TO THE KNOWLEDGE AND TREATMENT OF NERVOUS DISEASES. By Charles L. Dana, New York. THE RELATION OF ANIMAL EXPERIMENTATION TO THE LIVE STOCK INDUSTRY. By Veranus A. Moore, Ithaca, N. Y. ANIMAL EXPERIMENTATION AND NUTRITION. By Lafayette B. Mendel, New Haven, Conn. WHY ARE SPECIAL LAWS TO RESTRICT ANIMAL EXPERIMENTATION UNWISE? By J. G. Curtis, New York City. Each 4 pp., paper.

INDEX-CATALOGUE OF MEDICAL AND VETERINARY ZOOLOGY. U. S. Department of Agriculture, Bureau of Animal Industry—Bulletin No. 39, Parts 22 and 23. By Ch. Wardell Stiles, Ph.D., Consulting Zoologist of Bureau of Animal Industry; Zoologist of U. S. Public Health and Marine Hospital Service, and Albert Hassall, M.R.C.V.S., Assistant in Zoology, Bureau of Animal Industry. Paper. Washington: Government Printing Office, 1909.

NEW AND NONOFFICIAL REMEDIES, 1909. Containing Descriptions of the Articles Which Have Been Accepted by the Council on Pharmacy and Chemistry of the American Medical Association, Prior to Jan. 1, 1909. Paper. Pp. 168. Price, single copy: Paper cover, 25 cents. Cloth cover, 50 cents. Chicago: Press of American Medical Association, 1909.

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